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ABSTRACT

The term "functional communication" refers to the skills and knowledge possessed by an individual, from which that individual's competence or effectiveness may be inferred. Part one of this two-part book identifies and describes conceptual and methodological issues involved in evaluating, or empirically describing, the major components of interpersonal interaction related to functional communication. Part two contains brief reviews of 90 instruments, observation and category systems, and general assessment procedures designed to generate information on some aspect of an individual's functional communication. The book includes a brief commentary on apprehension and anxiety because of their importance as explanatory variables connected with low levels of functional communication competence. (MAI)

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Assessing Functional Communication

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Foreword

The current decade is characterized by fierce conflicts over the notion of "the basics." Many educators are valiantly resisting attempts by school boards and legislators to narrowly define what is basic in education. However, others have capitalized upon the potential of the basics movement to redefine the goals and terminal objectives of education. Using such battle cries as "ahead" and "forward to the basics," they have sought to determine what human beings need, not only minimally, for "survival," but also for the "pursuit of happiness" in contemporary society. In doing so, they seem to have resurrected longstanding educational goals that have often received lip service from state departments of education but that rarely have been implemented. Many of these goals focus on effective interaction through speaking and listening skills and, more specifically, on communication in everyday, functional situations. In the face of mounting evidence that these interactive skills may be what distinguish the "survivors" from the "nonsurvivors" in academic, vocational, and social contexts, we have come to realize that they are a vital aspect of basic education.

However, a major deterrent to progress in research and instruction has been confusion in defining "communication competence" and in assessing communication learning. By providing a working definition of the competent communicator and six dimensions critical to communication assessment, the authors of *Assessing Functional Communication* have furnished us with the beginning of a solution to these problems. Their in-depth analyses and organization of instruments for assessing functional communication have significantly advanced our potential for orderly research and meaningful teaching in a frequently neglected area.

This information analysis monograph is published by the Speech Communication Association in cooperation with the Educational Resources Information Center (ERIC) Clearinghouse on Reading and Communication Skills. Such analyses are a response to a directive from the National Institute of Education (NIE) that ERIC provide educators with opportunities for knowledge utilization beyond that provided by the ERIC data base. To close the gap between educational research and classroom teaching, NIE has charged ERIC to go beyond its initial function of gathering, evaluating, indexing, and disseminating information, to provide a significant new service, that is, commissioning recognized authorities to write information analyses that focus on concrete educational needs.

In each analysis paper, the author attempts to provide a comprehensive review of a topic and a judgment about where we are and where we need to go from here. Often the authors synthesize diverse approaches and suggest new directions. The knowledge contained in an information analysis is a necessary foundation for reviewing existing curricula, planning new programs, and aiding the teacher in current situations.

To my knowledge, the current analysis is unique in the communication and education literature, as well as in the literature of the other social and behavioral sciences. By thoroughly searching existing data bases and by organizing instruments in a scheme useful to classroom teachers, the authors have made a valuable contribution. As teachers, researchers, and educational policy makers rush to define and assess what is basic in education, it is imperative that they consider the dimensions of the competent communicator presented in this analysis.

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Introduction 1

For this volume to be useful to you, we need to clarify two points: what we mean by the term "functional communication" and the strategy we followed in developing a volume that deals with how functional communication may be measured. Some attention to these two points will be helpful, both in understanding the contents of this volume and in identifying the conceptual stances that guided our efforts in producing it.

Functional communication

A good point of departure for gaining understanding of our use of the term "functional communication" is the distinction between communication competence and communication effectiveness. Communication competence implies a minimal level of ability, basically with respect to two characteristics: (1) meeting the minimal communicative demands of a situation and (2) exhibiting socially appropriate behavior. Meeting the functional demands of a communicative situation implies only that, in initiating communicative acts or responding to the acts of others, one must maintain logical consistency in those acts. For example, if someone stops you on the sidewalk and says, "Hey, can you tell me how to get to Sprague Hall?" the functional demands of the situation involve a request for information and its subsequent provision. Moreover, a specific class of information is being requested, that is, *direction*. To exhibit communicative competence, you might respond, "You see that big, red-brick building there? Well, you walk up to the front of that building and turn to your right and, about a hundred yards down the hill, you'll see a big, modern-looking building with all kinds of glass all

over it. That's Sprague Hall." Or, to exhibit communicative competence, you might respond, "I'm sorry, I don't have the vaguest idea where Sprague Hall is." Either way, your response indicates that you have recognized the request for direction and have attended directly to that request. If your response is "Sprague Hall was constructed in 1896 as the original administration building and was remodeled in 1925. It now houses the Chemistry Department," you would not be meeting the functional demands of the situation. You would be providing information but not giving directions. If someone turns to you and says, "What time is it?" and you say, "Tuesday," you are not exhibiting much communicative competence. At the core of communicative competence is the notion that communication is competent if it meets the functional demands of the situation.

In a similar sense, communicative competence is closely aligned with the notion of socially appropriate behavior. We don't stop a person in an obvious hurry and try to engage that person in a lengthy philosophical discussion concerning the nature of love. We don't carry on lovers' quarrels in crowded elevators. We don't enter a room full of strangers and announce our preferences for certain sexual acts. Our communicative behavior is minimally competent if it rarely violates the norms of social appropriateness.

Most of us function competently as communicators. Indeed, if our formal and informal training has not at least developed some level of communicative competence, then the odds are either we will be isolated from the rest of society or else we will find, on our own, a subsegment of society very much like us and will spend most of our time there.

Most of the theoretical statements about, and the research conducted on, communicative competence involve young children. If you think of communicative competence as meeting the minimal functional demands of a situation and exhibiting socially appropriate behavior, then it is understandable that the theoretical and empirical focus should be on young children. Among autonomously functioning adults, we would expect communicative competence, *conceived of in this way*, to be present.

Communicative effectiveness, on the other hand, is a commodity rarer than competence. It is something we know far less about and exhibit much less frequently. Let's consider, for example, one aspect of communication: listening. Most of us are competent listeners, at least in the sense that we have learned to maintain the illusion of attention. That is, we will look at the other person, nod occasionally, show intermittent signs of interest, and say things that seem at least partially related to what the other person has said. And, if the other person leaves the encounter with a sense of having been listened to, then we can claim competence. But there is a tremendous difference between the sense of having "been listened to" and the sense of having "understood." How often have you felt really understood? Competence involves minimal levels of communicative functioning, and effectiveness involves communicating in such a way that certain

desirable outcomes are enhanced or facilitated. What is involved in listening competently is far less than what is involved in listening effectively.

Communication effectiveness implies the enhancing or facilitating of certain outcomes. You may be an effective communicator in many different senses. If another person understands the content of your communication or understands your unique personal characteristics, you may be effective in the sense that you have facilitated or enhanced accurate perception between you and the other. If you are able to change or modify another person's point of view on an issue, you may be considered effective in the sense that you have facilitated or influenced an outcome. If you can communicate with another person in such a way that the person values you more, values self more, or values the relationship more, you may be effective in the sense that certain emotional outcomes have been facilitated. Many different outcomes are used both to conceptualize and to measure an individual's level of communication effectiveness. For the moment, the point is simply that communication effectiveness implies something more than, and different from, communicative competence.

The distinction between competence and effectiveness is paralleled (not absolutely, but in terms of general trends) by different measurement strategies. Competence is usually assessed through objective-referenced or criterion-referenced tests. The purpose of these kinds of tests is to determine whether or not you can exhibit a particular skill, demonstrate a specific ability, perform a certain task, or meet a particular demand. Your score on such a test is a function of whether or not you respond correctly or adequately to the various test items. This is the strategy followed, for example, by the National Assessment of Educational Progress (Mead 1977), which is presently developing procedures for assessing the percentages of seventeen-year-old high school students in this country who are capable of performing each of a wide variety of communication operations.

A different testing strategy is called norm-referenced testing. This strategy is directed toward discovering *how well* you perform certain communication operations. The issue is not the presence or absence of a particular communication skill. The issue is the level of skill you are able to demonstrate, compared to the level of skill demonstrated by others responding to the same assessment procedures. Your score on such a test is not absolute; it is relative. That is, your inferred level of functioning depends upon how your score compares with the scores of others who have taken the same test.

Functional communication refers to the skills, knowledge, and attitudes possessed by an individual, from which that individual's competence or effectiveness may be inferred. The lowest level of functional communication is competence. Levels of functional communication above competence imply degrees of communication effectiveness. The purpose of this volume is to clarify some of the conceptual and methodological issues surrounding the measurement of functional communication and to provide you with some alternative

measures that may be used to assess degrees of functional communication ranging all the way from minimal competence to high levels of effectiveness.

The treatment of functional communication in this volume

This volume is divided into two parts. Part I represents an attempt to identify and describe some of the conceptual and methodological issues you are likely to be confronted by if you wish to assess, evaluate, do research on, or describe empirically some of the major components of functional communication. We have deliberately restricted our attention to those aspects of functional communication that are present in, and exhibited through, interpersonal interaction. We have made no attempt to include some of the more-specialized interests you might have: for example, public speaking, group communication, communication in families, organizational communication, and so on. Including such areas here would have been more than we had bargained for or had intended doing from the outset. However, there are two exceptions to this general disclaimer. First, we have included a conceptual and measurement section on apprehension and anxiety, even though this work originated primarily from an interest in formal public-speaking situations. The related concepts of apprehension and anxiety seem to us so essential to a reasonable conceptualization of functional communication that we allowed our own concerns to dictate their inclusion. Second, because of the nature of this volume and the principle audience for which it is intended, we included a number of measures directed toward description or evaluation of classroom interaction. These measures associated with classroom interaction are reviewed in part II. They represent some of the earlier category systems for describing classroom interaction and what we consider to be some of the major versions of those earlier systems, as well as some later category systems. If you are interested in assessments of classroom interaction, a far more detailed and useful reference to examine would be *Mirrors for Behavior* (Simon and Boyer 1974).

Part I of the present volume begins with an overview chapter directed toward the identification of some fundamental conceptual distinctions. This chapter may be useful to those who are not already familiar with ways in which communicative competence and communicative effectiveness have been treated theoretically. It is a brief overview, designed primarily to lay some fundamental groundwork within which the remainder of the volume may be better understood. Following this overview chapter are six brief commentaries. Each of these discusses a particular component of functional communication. These components are treated individually because, in each case, there are conceptual and methodological issues associated with that dimension of functional communication.

It is important to understand that the contents and organization of this book

have been dictated more by measurement concerns than by theoretical concerns. People were measuring, or at least attempting to measure, various dimensions of functional communication long before contemporary conceptualizations and theories of communicative competence and effectiveness emerged. We have attended to some of these recent conceptual frameworks in the first chapter, but our strategy in preparing this volume has been descriptive. We have attempted to describe those conceptual and methodological issues that traditionally have been associated with the assessment of functional communication, as well as those assessments that seem useful in measuring various components of functional communication. Part I treats six major dimensions of functional communication.

In the case of language development, the issues are primarily conceptual. We attempt a preliminary and very basic exploration of the role played by language in the more-general construct "communicative competence." Our purpose is to suggest a realignment of educational methodologies and philosophies, especially in the area of language arts, focusing such programs more specifically on the development of communicative competence and higher levels of communication effectiveness.

In the case of listening abilities, the issues are both conceptual and methodological. Theory and research on listening ability has suffered from conceptual confusion and methodological obstacles that have brought such theory and research to a virtual standstill. We have made no progress toward resolving these issues. We simply want you to know what are some of the fundamental issues in assessing listening ability.

In the case of interpersonal competence, the issues are mixed. Competence in interpersonal relationships is, paradoxically, somewhat easier to assess than to explain. The situation is not unlike that which exists in the study of personality or in the study of leadership. It is difficult for individuals to agree as to what it is. However, once having adopted a rather narrow theoretical perspective that isolates a few dimensions of the construct, the development of measures is not difficult.

In the case of nonverbal communication, our commentary has a more-specific purpose. In part II of this book, we restrict our attention to those nonverbal-communication measures in which the interpretation of nonverbal cues may be scored as either appropriate or accurate. Consequently, we have ignored those assessment procedures directed toward the description of various aspects of nonverbal communication, and, because of this, we direct our attention in part I toward systems by which nonverbal communication behavior may be described rather than evaluated in terms of normative criteria.

We have included a brief commentary on apprehension and anxiety because we believe these to be potentially important explanatory variables that ultimately may be connected, both theoretically and empirically, with low levels of functional communication competence.

In the case of empathic ability, the issues are primarily methodological. This component of functional communication is very close to one very important criterion against which most communication may be assessed: "understanding." As was the case with listening ability, theory and research on empathic ability was almost destroyed for a decade by serious methodological criticisms of tests of empathic ability. Most of these criticisms have been tempered or resolved, at least to the extent that it is reasonable to consider contemporary assessments of empathic ability to be adequate.

The various sections of part I are all introductory. If you are already familiar with the conceptual and methodological issues associated with the particular component of functional communication, they may serve as review. However, if you are not familiar with the issues surrounding a particular component of functional communication, then the various sections of part I will acquaint you with some of the more fundamental issues.

In part II, we present brief reviews of ninety instruments, observation and category systems, and general assessment procedures designed to generate information on some aspect of an individual's functional communication. These measures are briefly reviewed. You are told, in each case, where to obtain additional information should you be interested in pursuing a particular measure. There is an alphabetical list of these measures, and you will find also a section entitled "Measures Grouped by Function and Age." This section classifies measures in terms of the functions or components about which the measures will yield information and according to the general age category for which the measures are most appropriate. A table is provided to assist you in finding those measures in which you are most interested.

Part II begins with a chapter discussing basic measurement concepts. If you are not familiar with those criteria ordinarily used in assessing the adequacy of a measure, you may wish to read this introductory chapter. It describes some of the basic measurement concepts, particularly those concepts concerned with adequacy of measurement, such as reliability and validity. This chapter consists of very fundamental explanations of measurement concepts. If you are already familiar with measurement concepts, you may wish to proceed directly to the brief reviews, on the assumption that our use of certain measurement terms will be understandable to you.

In the development of this volume, we have been repeatedly confronted by the complexity of the phenomenon we are addressing. We have, of necessity, imposed certain conceptual constraints or organizational strategies on the material presented. Such decisions have, in almost all cases, been guided by an intent to be helpful rather than a desire to make a theoretical statement about the phenomenon.

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CONCEPTUAL ISSUES

Defining Communication Competence 2

The educational process in the United States has come under ever-increasing scrutiny in the past two decades. Beginning with the "Sputnik" controversy of the late 1950s and moving through the university protests of the late 1960s, the ways and means of education have come under attack. Books, such as Silberman's (1970) *Crisis in the Classroom: the Re-Making of American Education*, Holt's (1971) *Why Children Fail*, Postman and Weingartner's (1969) *Teaching as a Subversive Activity*, and Illych's (1975) *The De-Schooling of Society*, have pointed out a wide variety of concerns with the educational process. These authors, as well as others, have raised a number of points concerning the inadequacies and shortcomings in many aspects of the educational system.

These concerns have spawned a number of efforts designed to "correct" problems noted in the learning levels of students. Some of these efforts have been termed "minimal competency testing," "competency-based education," "functional competencies," and "back to the basics." Such efforts generally are focused on the identification of specific competencies that contribute to the mastery of a skill or of knowledge (Hall and Jones 1976). The argument advanced is that, the more numerous the areas in which a student develops competence, the more effectively the individual will be able to function in general society. While these efforts are, for the most part, in developmental stages, they reflect a growing concern about education's ability to assist the student in acquiring necessary functional skills. Efforts are now being made to define functional competence in various subject areas and to determine what skills a student needs in order to behave in a minimally competent manner.

It seems that one of the areas of knowledge or competence most essential to effective functioning is the ability to communicate effectively. Some individuals (Reusch 1955; Duncan 1968; Dance and Larson 1972, 1976) suggest that a relationship exists between the ability to use the communication process and the ability to function in society. In order to function adequately in society, a person must be competent in the use of communication process.

The purpose of this chapter is to explicate this relationship, by describing communication competence and its place in the educational process. To accomplish this, the chapter is divided into three sections: (1) a brief description of general goals of education and of speech communication education, (2) definitions of communication competence, and (3) functions and dimensions of communication competence.

Educational Goals

In order to discuss a concept that, at least partially, may guide educational strategies, it would first be appropriate to summarize the goals those educational strategies attempt to attain. Some of the important related issues are "what sort of person do we want to end up with?" and "what should the student gain from the educational process?" By briefly exploring questions such as these, it may be possible to develop a foundation and a rationale for the inclusion of communication competence as an important concept for education.

At the most-general level, the goal of education is to create free men and women—a process that Oraison (1959) calls "the progressive acquisition of autonomy." He states that "education in the final analysis exists essentially in the culmination and the promotion of liberty of future adults" (p. 18). But, to be more specific, what does it mean to be free? What does it mean to be autonomous? John Henry Cardinal Newman, writing in *The Idea of a University* (1941), says:

> It is the education which gives a man a clear conscious view of his own opinions and judgments, a truth in developing them, an eloquence in expressing them, and a force in urging them. It teaches him to see things as they are, to go right to the point, to disentangle a skein of thought, to detect what is sophisticated, and to discard what is irrelevant. . . . It shows him how to accommodate himself to others, how to throw himself into their state of mind, how to bring before them his own, how to influence them, how to come to an understanding with them, how to bear with them. He is at home in any society, he has common ground with every class; he knows when to speak and when to be silent, he is able to converse, he is able to listen, he can ask a question pertinently, and gain a lesson seasonably, when he has nothing to impart himself; he is ever ready, yet never in the way, he is a pleasant companion and a comrade you can depend on;

> he knows when to be serious and when to trifle, and he has a sure tact which enables him to trifle with gracefulness and to be serious with effect. (Pp. 196–197)

In 1932, a committee representing the faculties of three universities—Harvard, Princeton, and Yale—convened to discuss the goals of a general education. The following statement appeared in the volume *General Education in School and College*:

> The liberally educated man is articulate, both in speech and writing. He has a feel for language, a respect for clarity and directness of expression, and a knowledge of some language other than his own. He is at home in the world of quantity, number and measurement. . . . He knows a good deal about the world of nature and the world of man, about the culture of which he is a part, but he is never merely "well-informed." He can use what he knows, with judgment and discrimination. . . . He has convictions, which are reasoned, although he cannot always prove them. He is tolerant about the beliefs of others because he respects sincerity and is not afraid of ideas. He has values, and can communicate them to others not only by word but by example. . . . Above all, the liberally educated man is never a type. He is always a unique person, vivid in his distinction from other similarly educated persons, while sharing with them the traits we have mentioned. (Pp. 19–20)

Of the variety of attributes of the educated person discussed in these two quotations, it is important to notice the stress placed on the use of language for expression and communication. Speech communication has been described as the study of spoken symbolic interaction (Barker and Kibler 1969) and has been defined as "the process, or the product of the process, of the fusion of genetically determined speech with culturally determined language" (Dance and Larson 1972; p. 11). This definition points out two aspects of that study: the individual's ability to speak—to use symbolic language—and the individual's ability to use that language within the culture.

Dance (1972b) suggests that "the spoken word, rather than being peripheral or incidental, is central to human communication" (p. 197). This belief is shared by other writers, notably Langer (1972), who states, "The power of speech transformed the genus 'Homo' and every aspect of its ambient; for with speech came thought and remembrance, intuition, conception, and reason" (p. 316). In terms of the pervasiveness of speech and language, she writes: "The mind is so largely formed and its higher functions sustained by words and ways of wording ideas that the linguistic influence is not limited to cortical, rational, and semi-rational processes, but reaches far into the emotional sphere, coloring fantasies

and even perceptions" (p. 353). A description of communication competence would necessarily take the position that the ability to use the spoken word is central to the child's development as an effectively functioning human being.

Communicative ability may be seen as serving three functions for the individual (Dance and Larson 1976). The first is the linking function. On a basic level, every living organism functions in an environment and, in order to survive, must gather around it a nucleus of those things that will sustain life. The quality of the link between the organism and the environment will govern the quality of life for that organism. For humans, the primary (though not the only) means of establishing this link is speech communication—spoken symbolic interaction. Dance (1972a) states that "the development of self-concept, of role realization, and of social bonds, all reflect the impact of the spoken word on [this] function" (p. 199).

The second function is the development of higher mental processes. With respect to this function, it is argued that most thought is verbal, that thought and language are inseparable components of reasoning, and that speech facilitates both the communication of thoughts to other individuals and the reception of their thoughts. There seems to be a direct, positive relationship between the individual's ability to use symbols (language) and the individual's ability to conceptualize.

The third function is the regulation of behavior. Dance (1972a) states: "Overt verbalization has been extensively used as an aid in changing opinion and belief as evidenced in its use in criticism and self-criticism in thought control techniques" (p. 199). It is easy to see that overt vocalization can and does function as a regulator, both for the behavior of others and for the behavior of oneself.

Educators in speech communication traditionally have attempted to assist students in developing communicative abilities in a manner that fits well with the goals of general education discussed earlier. Scholars in speech communication have been working in recent years to specify the communicative behaviors, skills, and levels of knowledge that would allow a person to function competently as a communicator. This book is an attempt to define functional speech communication competence and to describe the procedures used in assessing aspects of that competence. The following section presents definitions of communication competence proposed by various scholars.

Definitions of communication competence

It seems clear that the individual's communication competence is a proper concern of education. What is less clear, however, are the skills and knowledge a person must have in order to communicate competently, appropriately, or effectively. At least some clarity must be attained or imposed if we are to devise relevant and useful educational strategies that will increase the student's communicative abilities.

Communication competence: The term *competence* generally refers to the ability of a person to function in the world. Argyris (1965) states that "the competence of a living organism means its fitness or ability to carry on those transactions with the environment which result in its maintaining itself, growing, and flourishing" (p. 59). This notion is supported by White (1959), who believes that competence refers to an organism's capacity to interact effectively with its environment. The competent organism, then, could be said to be one that has the knowledge and skill to interact effectively with its environment so that its existence is maintained and possibly enhanced.

The term *communication* as a modifier for competence generally refers to the specific competence exhibited through the communication process. The definitions used by various scholars in their writing about communication competence allow discussion of the commonalities of the definitions and the concepts underlying communication competence. It is apparent that the definitions vary on certain dimensions, and these reflect issues that will require elaboration.

> Creative use of language; that is, the ability of a speaker to devise novel sentences appropriate to new situations. (Hymes 1971; p. 17)

> Competence is the most general term for the speaking and hearing capabilities of a person. Competence is understood to be dependent on two things: (tacit) knowledge and (ability for) use. (Hymes 1971; p. 18. Parentheses in original.)

> Communication competence is the ability of an interactant to choose among available communication behaviors in order that he may successfully accomplish his own goals during an encounter while maintaining the face and line of his fellow interactants within the constraints of the situation. (Wiemann 1976; p. 7)

> Communication competence, unlike linguistic competence, involves awareness of the transaction that occurs between people. Competence, in this perspective, is tied to actual performance of the language in social situations. (Allen and Brown 1976; p. 248)

> The knowledge which speakers possess about the set of rules which detail the appropriate communication behavior within a subculture for a given situation is often referred to as communication competence. (Wrather 1976; p. 5)

From these definitions emerge five important issues that require attention; these concern linguistic competence, knowledge-versus-ability, contextuality, appropriateness, and accomplishment. A discussion of these issues should clarify the concept of communication competence and how it may be understood in relation to similar concepts and educational strategies.

Linguistic competence contrasted with communication competence

The first distinction that should be made is between linguistic competence and communication competence. In comparing these two concepts, it should first be noted that communication competence has its roots in linguistic competence but differs from it in several important ways. Linguistic competence and linguistic performance are grammatical concepts developed initially by Chomsky (1965). The most widely accepted view of linguistic competence held by psycholinguists is that it is "the speaker-hearer's knowledge of his language . . . the finite system of rules which enable him to comprehend and produce an infinite variety of novel sentences" (Nicholson 1974; p. 4). This view of linguistic competence (grammatical knowledge) excludes performance. For psycholinguists, performance is not competence but the expression or realization of competence in behavior. When discussing communication competence, it seems less profitable to make this distinction between knowledge and performance. Contemporary views of communication are process oriented and assume that the interaction between people is of far greater interest than the levels of linguistic competence exhibited. It might be said that, while the definition of linguistic competence focuses on the awareness of the relationship between words, the definition of communication competence focuses on the awareness of relationships between people. It can be argued that performance reflects the presence or absence of competence. Communication competence, in part, is dependent on linguistic competence, but linguistic competence does not imply the presence of communication competence. It should be noted by the reader that the word *competence* has slightly different meanings for the linguist and for the student of human communication. For the linguist, competence is separate from behavior. But for the concept of communication competence that we are following in this volume, competence is tied to behavior, to the actual use of the communication process by the individual.

Possession of competence

The second issue arising from these definitions concerns the possession of competence, and this is particularly critical to the assessment of individuals. The assessment of competence depends a great deal upon the way in which we believe competence to be manifested in the individual—how we may know whether or not an individual is competent.

The definitions presented earlier used a variety of terms implying possession: knowledge, skill, ability, awareness. This "implied possession" can be seen as a result of the evolution of the concept of communication competence from that of linguistic competence. One question central to this issue is the question of intent. Does a person have to make a conscious decision about what to do in order to be judged communicatively competent? Or is the mere exhibition of competent behavior sufficient evidence? In approaching this issue, one can look at the differences between knowledge, skills, and behavior. Scheffler (1965) discusses this distinction. He divided ability into the subclasses "facility" and "critical skill." Facilities are behaviors seen as automatic or as so ingrained that they appear to be automatic. Critical skills are acquired through training and are improved by practice that requires strategic judgment. Critical skills require conscious knowledge, while facilities do not.

Scheffler's discussion of "knowing" continues by differentiating between "knowing that," as a propositional term, and "knowing how," as a procedural term.

> "Knowing how to" represents the possession of a skill, a trained capacity, a competence, or a technique. We discussed skills earlier and distinguished them from traits, habits, or propensities, as well as from attainments—i.e., appreciation and understanding. Certainly having a skill is also quite different from knowing *that* the skill is such and such. A person might well have all the relevant information concerning some skill without having the skill itself, and conversely, he might be skilled without having any given piece of information concerning the skill in question, though it is unlikely he would lack all relevant information. (P. 92)

Scheffler also differentiates between learning and teaching and the narrower concept of knowing. Unlike knowing, learning and teaching are terms of "active propensity"; there is not "knowing to," but there is "learning to" or "teaching to." One learns the skills of decentering and of understanding; one is taught the appropriate time to say the appropriate thing.

Scheffler also discusses skills. He believes that skills are "typically built up through repeated trials or performance" (p. 20). He states:

> the notion of proficiency or mastery seems peculiarly applicable to skills. One may attain proficiency in driving or become a master in chess, but one cannot be described as proficient in punctuality or honesty nor as having become a master of the habit of taking a walk before breakfast. (P. 20)

This proficiency in skills could well be a description of what communication competence requires. Polanyi (1958) gives a description of how skills are acquired that is applicable to the acquisition of communication competence.

> Indeed, the premises of a skill cannot be discovered focally, prior to its performance, nor even understood if explicitly stated by others, before we ourselves have experienced its performance, whether by watching it or by engaging in it ourselves. In performing a skill we are therefore acting on certain premises of which we are focally ignorant, but which we know subsidiarily as part of our mastery of that skill, and which we may get to know focally by analyzing the way we achieve success (or what we believe to be success) in the skill in question. The rules of success which we thus derive can help us to improve our skill and to teach it to others. (P. 162)

Skills are seen as the ability to do or to behave in a particular manner. Skills allow one to "function" in a given situation. If these skills are in the area of communication, one should be able to infer an individual's competence in communication from the skills manifested by that individual. Communication competence is seen, then, as a set of skills that can be taught and learned. This point has important implications for the assessment of individuals: in this conception of communication competence, emphasis must be placed on the ability to "perform," as well as on the level of cognitive knowledge.

Contextuality

We have emphasized performance as a criterion for determining the competence of an individual. But, to examine performance, we must include a discussion of the context in which the performance occurs, for it is readily obvious that the context surrounding a communicative event will have a bearing on the type of communicative behavior displayed. Hymes (1971) described the contextual nature of communication competence:

> We have then to account for the fact that a normal child acquires a knowledge both of proper sentences and of their appropriate use. He or she develops the abilities to judge when to speak, when not, and what to talk about with whom, in what way, and when and where. (P. 55)

The context appears to serve as a source from which the individual gathers information to be used in the construction of communicatively competent messages. Context can be divided into three dimensions: the verbal context, the relationship context, and the environmental context.

The verbal context can be further subdivided into three types. The first can be described as the "word context"—whether particular words are appropriate in the context of other words. The second is the "sentence context"—whether words fit together in a particular order to express a complete thought. The third is the "topic context"—within a given conversation on a particular topic, there exist a range of sentences or comments that are appropriate or inappropriate.

The relationship context represents the adaptation of communication behavior to the presence of another person. Relationships involve other people, and the ability to adapt the message and the communicative behavior to those people is critical to communication competence. Since each relationship is, to an extent, unique, the individual must be able to determine the type and style of message appropriate in that particular relationship. The communicatively competent person must be able to make adaptations that are appropriate to the relationship.

The third and final context that affects communicative behavior is the environmental context. Surroundings suggest certain types of behavior. For example, the type of conversation appropriate in a church is different from that appropriate in a bar. The communicatively competent person must be able to make the adaptations appropriate to the surroundings. In the analysis of an individual's communication competence, one must take into account the physical context of that communicative behavior.

It has been suggested that competence is related to the number of contexts to which an individual has been exposed (Allen and Brown 1976). Johnson (1974) suggests communication competence is not an "all or nothing" capability. Individuals will probably be differentially competent when dealing with different topics, with different people, in different situations. The overall level of a person's communication competence will increase as the ability to meet appropriately the communication demands of more varying situations increases.

Context, then, has two influences on communication competence. First, it influences the form of communicative behavior that will be seen as competent. What is competent in one situation may not be seen as competent in another. Second, in assessing an individual's communication competence, we should take into account the contexts that person encounters.

Appropriateness

Appropriateness may be the most-difficult issue to handle in the conception of communication competence. Since competence is tied to context, what constitutes appropriate behavior in a given context must be considered. Agreement on what constitutes appropriateness may be difficult to reach. Yet the issue cannot be ignored. Research into communication competence (Krauss and Glucksberg 1969; Riccillo 1974; Wiemann 1976) indicates that competence is a

socially judged phenomenon. In these studies, judges determined the degree to which subjects' responses met the demands of the initial message. Communication competence became an ability attributed to an individual by others. If subjects were seen as responding appropriately to the message, they were judged as having a degree of competence. "Appropriateness," then, is a fundamental criterion for competence. What is appropriate in a given situation is defined by a combination of cultural norms, group norms, standards of the specific relationship, and acceptable language usage. This combination usually allows a range of appropriate communicative behavior. The individual needs a minimal knowledge of all the relevant norms in order to function within that range of appropriateness.

Accomplishment

The last issue to be discussed concerns accomplishment (Wiemann 1976). Accomplishment, effectiveness, and success are terms that are often used in conjunction with communication competence. These terms, however, describe outcomes implying more than minimal levels of competence. For example, Tubbs and Moss (1974) write that communication is effective when "the stimulus as it was initiated and intended by the sender closely corresponds with the stimulus as it is perceived and responded to by the receiver" (p. 9). Bearison and Cassel (1975) define communication effectiveness as the ability of a speaker to meet the listener's information needs by coordinating his or her own perspective of the communicated topic with the perspective of the listener. The emphasis is on accuracy and on the ability of the individual to meet the requirements of the other person. McCroskey, Larson, and Knapp's (1971) conception of effectiveness is quite broad:

> There is a wide range of outcomes any one of which might warrant the judgment that communication between two people has been "effective." In some cases communication will have been effective if the individuals involved have arrived at a greater mutual understanding of attitudes, sentiments, opinions, etc. In other situations, communication will have been effective if the attitudes or beliefs of one or both parties change as a consequence of the interpersonal encounter. In still other situations, we are interested primarily in being liked or evaluated favorably by another. (P. 15)

Effectiveness implies achievement of a goal. Communication competence may facilitate goal attainment, but the outcome of competence is the judgment of appropriateness. Communication competence is a more-basic concept, a concept of social interaction, while effectiveness implies attainment of goals or satisfaction of needs. A competent person may or may not act effectively. An effective person may or may not act in a competent manner—that is, in an appropriate one.

Another term, sometimes used as a synonym for communication competence and communication effectiveness, is interpersonal competence. Weinstein (1969) defines interpersonal competence as the ability of a person to accomplish interpersonal tasks. He states, "This is no more than saying that interpersonal competence boils down to the ability to manipulate the responses of the other" (p. 755). This seems to differ from communication competence, again, in intentionality. However, Bochner and Kelly (1974) see interpersonal competence as the ability to interact effectively with other people. Three criteria associated by Bochner and Kelly with interpersonal competence are (1) the ability to formulate and achieve objectives, (2) the ability to collaborate effectively with others—to be interdependent, and (3) the ability to appropriately adapt to situational and environmental variations. Hale and Delia (1976) state that, to be interpersonally competent, the child must develop the social cognition skills involved in interpreting social situations in order to adapt flexibly to them. Foote and Cottrel (1955) define interpersonal competence as the ability of an individual to shape the responses of others. Thus, interpersonal competence is quite similar to communication effectiveness, if not indistinguishable from it.

This review of the issues surrounding the conceptualization of communication competence indicates that the concept is still an amorphous one. The definition that emerges is this: communication competence is the ability to demonstrate knowledge of the communicative behavior socially appropriate in a given situation. The word "ability" has been used to indicate the skill or performance necessary for communication. The word "knowledge" indicates those residual rule patterns that are a cognitive part of a communicatively competent person. "Communicative behavior" is specifically those actions that are carried out through the use of speech. "Socially appropriate" implies the explicit or implicit criteria against which a person is judged. The "given situation" is the context that a person's behavior must reflect.

Dimensions of communication competence

The preceding section provided a view of how different authors have defined communication competence. These authors have also described what each believes to be the dimensions (abilities, skills, functions, aspects of knowledge, and so on) of communication competence. In this section, several conceptual systems are presented, along with some elaboration of the dimensions that appear with the greatest frequency, ultimately pointing to what may be the major dimensions of communication competence.

Brown and Allen (1976) point out four features that characterize communication competence in the individual: (1) The exercise of competence depends upon a repertoire of experience, (2) it requires that the individual make critical choices from that repertoire, (3) it is revealed when suitable behaviors are brought to bear in performing desired tasks, and (4) it is sustained when

individuals are able to evaluate their performance objectively—thus enriching their repertoires of experience.

Wang, in the introduction to the Language Skills Task, describes very general aspects of verbal communication skills.

> Differences found in young children's verbal communication skills are attributed to more than just differences in such linguistic qualities as syntactic structure, vocabulary, and intelligibility. The differences in communication skills are strongly influenced by such factors as the child's ability to take the listener's role, his ability to order and classify relevant information, the nature and amount of feedback information supplied by the listener, and the appropriateness of the response of the speaker to the feedback. (P. 1)

More specifically, Allen and Brown (1976) identified six processes that appear to be associated with the development of communication competence. These six are interaction strategies, role-taking, play, referential communication, reasoning, and persuasibility. We see the first two as being critical to the conception of communicative competence.

Interaction strategies, also known as interaction management (Wiemann 1976), appears to be one of the most central of the developmental processes. Argyle (1969) listed two general interaction-management skills that relate to competence: (1) the ability to establish and sustain a smooth and easy pattern of interaction and (2) the ability to maintain control of the interaction without dominating, to respond in accordance with an internal plan, rather than simply to react to the other's behavior. It is relatively apparent that social rules govern interaction between people. Such rules include these: (1) interruptions of the speaker are discouraged, (2) one person talks at a time, (3) speakers take turns, (4) frequent and lengthy pauses are avoided, and (5) listeners devote full attention to the encounter (Wiemann 1976). Awareness of the social rules under which one operates is essential to the competent functioning of an individual. Interaction management is concerned with the "procedural" aspects that structure and maintain an interaction. These include initiation and termination of the encounter, allocation of speaking turns, and control of topics discussed. Competent interaction management is the ability to handle these procedural matters in a manner that is satisfactory to all participants. Underlying the forms of "appropriate" behavior is the responsibility of each person to confirm the other—the ability, termed "face work" by Goffman (1967), that makes a person an acceptable participant in an encounter.

A variety of authors (Mueller 1972; Rodnick and Wood 1973; Butt 1973; Fogel 1974; and Phillips, Butt, and Metzger 1974) support the conclusion that children begin to learn these rules as they begin to learn to talk. The learning process is, for the most part, unconscious. Educational strategies can, perhaps, aid in the

development of awareness of the social rules and their appropriate use in conversation. This awareness can be further developed into interaction strategies by the child. At a minimal level of competence, the child would be able adequately to conform to the social rules of a situation. At higher levels of competence or effectiveness, the child would be able to take an active part in the outcomes of the conversation, through the manipulation of interaction strategies.

The second of the six processes discussed by Brown is "role taking." This concept and concepts very similar to it (including empathy, decentering, and social perspective taking) also appear to be critical to communication competence. Weinstein (1969) suggests that empathy is the ability to take the role of the other accurately, to predict the impact of various lines of action on another person's definition of a situation. Role taking is a cognitive process in which the individual cognizes, apprehends, and grasps certain attributes of another individual (Flavell and others 1968). Hale and Delia (1976) see social perspective taking as a fundamental progression in development from egocentrism to perspectivism. "When fully articulated cognitive structures are developed, the person is assumed to be able to shift in focus from an egocentric embeddedness in his own point of view to a cognitive orientation in which diverse aspects of objects or social situations are simultaneously taken into account" (p. 197). Flavell (1968) suggests that the success of a message is directly related to the capacity of the speaker to understand the receiver's point of view, or role, and to recast messages in light of the receiver's role. Decentering, as a similar concept, has been described by Dance and Larson (1976) as the ability to view oneself as an object, descriptively and analytically, and to see oneself from other perspectives. Hale and Delia (1976) maintain that, in a conception of communication competence, role taking or social perspective taking—the capacity to assume and maintain another's point of view—becomes the basic cognitive process in communication. This dimension appears to be crucial to any conception of communication competence.

These two dimensions, interaction management and role taking, appear to be the two dimensions most frequently discussed in the literature as being critical to communication competence. Yet there are a variety of other dimensions discussed by various authors. A review of these other dimensions of communication competence indicates that they can be divided into two categories: dimensions related to the interaction process and dimensions related to the individual's abilities. The first category, relating to the interaction process, can be seen as describing outcomes or functions of the interaction process. When competent communicative interaction occurs between two people, the outcome can be examined to determine what "passed between" the two individuals that allowed each one to perceive the other as competent. An examination of the dimensions suggested by various authors yields a list that includes affiliation, support, and social relaxation (Wiemann 1976) and control, information, and feelings (Allen and Brown 1976).

The second category can be seen to concentrate on the individual's abilities as a competent communicator. Here the concern is the determination of the information and skills the individual must have in order to function in a competent manner. Individuals who have examined dimensions in this category have been interested in understanding what the communicatively competent individual brings to an encounter, rather than what occurs during the encounter. An examination of the dimensions proposed in this area by various authors yields a list that includes behavioral flexibility, self-disclosure, and owning thoughts and feelings (Bochner and Kelly 1974); reasoning and persuasibility (Allen and Brown 1976); and nonverbal receiving ability, linguistic competence, and willingness to communicate (Backlund 1977).

Both of these categories may serve as focal points for research and for the development of educational strategies. In understanding and in helping to create communication competence in individuals, attention can be given to both categories—the functions or outcomes of the interaction process and the abilities the individual brings to that process.

One further point deserves consideration when one selects dimensions of communication competence for classroom development; that is the generality or specificity of the dimensions. One might imagine a continuum on which the dimensions range from the very general to the very specific. The very-general end of the continuum, for example, may be represented by Foote and Cottrell (1955). Their list of the dimensions of competence includes autonomy, creativity, empathy, health, intelligence, and judgment. At the other side of the continuum are specific behavioral objectives of the type found in many performance-based courses.

In terms of educational applicability, both ends of this continuum deserve consideration. The very-general characteristics may be looked upon as objectives or goals for speech communication education. The very specific characteristics represent strategies or techniques useful in developing communication competence in given situations.

It may be helpful to review what we have discussed so far about communication competence and to tie together the issues and dimensions. We attempted first to help the reader appreciate the importance of communication competence in the development of a socially functioning person. The importance of communication competence cannot be overstated in terms of effective and successful behavior in a social environment, as well as in terms of the development and maintenance of other basic human functions (mentation, regulation, and so on).

We have chosen to define communication competence as the ability to demonstrate knowledge of the communicative behavior socially appropriate in a given situation. This definition reflects many of the key elements that constitute the phenomenon called communication competence. "The ability to demonstrate" implies a performative output that can be examined as a set of skills

demonstrated by the individual. However, the inclusion of the word "knowledge" reflects the linguistic influence from which communication competence was derived. In that framework, competence is an internal state of knowledge augmented by performance, but the two maintain separate identities. The term "communicative behavior" delimits the types of behavior with which we are most concerned. The phrase "socially appropriate" reflects the fact that we are concerned with adherence to some socially prescribed rules. Competence then must be examined in terms of the particular cultural group against which an individual is compared.

The last element that is critical in distinguishing communication competence from other phenomena is contextuality, the quality of being appropriate to a given situation. With respect to situation, we have defined three contexts: the verbal context, the relationship context, and the environmental context. This element of the definition is closely related to the concept of what constitutes social appropriateness. Indeed, the two aspects work jointly to define the skill and awareness that must be directed toward the social rules regulating communicative behaviors.

In order to come to a clearer understanding of the concept of communication competence, we compared it with various other terms that are often associated with it. Those terms include linguistic competence, communication effectiveness or accomplishment, interpersonal competence, and communication skills.

Communication competence is a more-encompassing term than is linguistic competence. One needs to have linguistic competence in order to have communication competence, but communication competence requires more than just linguistic competence.

Communication competence is manifested in communication skills and performance. Skills are developed through performance and the subsequent assessment of the effects of that performance. Communication competence can be viewed as a constellation of skills.

Communication competence differs from communication effectiveness in that the latter is concerned with particular outcomes. Competence, though contributing to effectiveness, can be conceptualized and operationalized without concern for outcomes sought or attained.

Interpersonal competence places strong emphasis upon achieving some goal. It is generally treated as requiring intentional action. Communication competence, again, may be used for these aims, but such aims are not essential to its definition.

The second half of this commentary was devoted to exploring the dimensions of communication competence. These dimensions basically are the types of skills or abilities one must have to be communicatively competent. They included decentering or role-taking abilities, interaction-management abilities, linguistic competence, nonverbal skills, disclosing abilities, listening abilities, and others. The list could be extended, but there are two general categories into

which such skills and abilities can be placed: interaction awareness and personal attributes.

It was suggested that the dimensions can be viewed on a continuum from general to specific. On the general end might be "empathy," and on the specific end might be "ability to paraphrase the sentences of others."

These conceptualizations are, for the most part, recent. If one examines the ways in which various aspects of functional communication traditionally have been measured, some of the more recently conceived dimensions are not well represented in the assessment procedures available. The dimensions that emerge from a review of measures are reviewed in the following six commentaries.

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3 Dimensions of Functional Communication

Language Development

The age-old nature/nurture question lingers on in the halls of academe. Are good _____ born or made? (Fill in the blank.) With respect to language, is the course of an individual's language development predetermined by genetic code? Or is the individual's mind a blank slate upon which may be written the learnings of the world? Skinner (1957) implies that everything interesting about language is learned. His views maintain considerable force today. Lenneberg (1966) implies that everything interesting is innate. Whatever the outcome of this debate (if there will be an outcome), it is clear that we are biologically prepared to talk, and it is also clear that a child accomplishes with relative ease the enormous task of learning a language (Brown 1976). Indeed, so easy is it for most of us to accomplish the task, that those who do not do so or who exhibit differences or errors in their learning are in trouble with the rest of us.

A significant portion of the educational efforts made in United States schools is directed to the development of the individual's ability to use language. The general goal of these efforts is to assist in creating an individual who fits into the communicative community and whose language use is appropriate to the expectations of others in society (Naremore 1976). The learning process that helps accomplish this goal is less clear. The purpose of this chapter is to summarize one point of view in that process—to describe the relationship between language and our conception of communication competence. The chapter is organized in four areas: (1) perspectives on language development and on the functions of language, (2) the goals of language education that pertain to

communication competence, (3) educational implications for language development, and (4) instruments relating to the linguistic aspect of communication competence.

Language development

While the primary purpose of this book is to summarize the available assessment procedures for various aspects of communicative behavior, we are also presenting a point of view that concerns the role of language in communicative behavior. Before the instruments can be presented, this point of view needs to be outlined, so the reader will have a clearer view of the use and interpretation of the instruments associated with language skills and behaviors, along with the educational concepts which underlie them. To provide this framework, traditional areas of language development and goals of language education will be summarized.

Language development in children has traditionally been divided into four areas: phonology, syntax, semantics, and pragmatics. Each area will be briefly described in order to provide a background for the use of the instruments.

Phonology is the study of the sound of language. As every language has a distinct set of phonemes, or sound units, the development of a child's ability to discriminate and articulate these sounds is critical to the development of language. There are several ways to describe phonemes; among them are classification by place and manner of articulation and by distinctive sound features. Children seem to acquire the sound system by learning a system of contrasts, beginning with the major contrast between consonants and vowels, then proceeding through finer and finer contrasts, until they have learned to contrast the distinctive features of the language they are learning (Hopper and Naremore 1973). Normally, a child is able to articulate the necessary phonemes in the language by the time he or she reaches school age. For references in the development of phonology, the reader is directed to Jakobson and Morris (1956), Lewis (1963), and Hopper and Naremore (1973).

The study of syntax is generally conceived of as the study of the structure of the sentence. For many of the current theories on syntax, we are indebted to the psycholinguists, notably Noam Chomsky. As noted in chapter 2, Chomsky distinguished between linguistic competence and linguistic performance. This distinction has some implications for the assessment of syntactic knowledge in children. For the average person, much of what she or he might know about the language is subconscious. While most people may not be able to relate the rules of grammar, most people can distinguish between a good sentence and a bad one. The same holds true for children. Most children, by the time they reach school age, implicitly know a great deal about the structure of language, but they do not realize that they know. This presents some problems. Coaxing the child to demonstrate this knowledge can be rather frustrating. In one study, the

experimenter asked a child of two, "What is right, 'two shoes' or 'two shoe'?" The child answered, "Pop goes the weasel!" (Brown and Bellugi 1964; reported in Hopper and Naremore (1973). We cannot say that the child did not know the correct form, merely that he did not demonstrate it. Much of child language research entails trying to trick the child into showing what he or she knows. Accurately assessing the child's linguistic competence can be extremely difficult.

By the age of four or five, at the latest, the child has acquired most of the basic principles of syntax. Recent studies (C. Chomsky 1969; Kessel 1969) indicate that the child does not master some syntactic rules until age ten or twelve, and a number of studies (Loban 1963; O'Donnell 1967; Kramer, Koff, and Luria 1972) indicate that some people never learn all the rules of syntax, even subconsciously. Yet Kramer, Koff, and Luria note that this seems to pose no great difficulty. Differences in linguistic competence do not result generally in communication difficulties, except in instances which call for a specific kind of competence. They state, "It seems to us that adult speakers have enough redundancy in their everyday speech to cover up a lack of linguistic competence" (p. 130). This poses an interesting question for educators concerned with a child's ability to communicate effectively with others. The foregoing quote suggests, and some might argue, that the form (grammatical correctness) of a message is unimportant. What is important is that the message is received and accurately understood. The communication of content takes precedence over form. Yet, for many people of this culture, form *is* content. That is, the way a message is said communicates as much as what is said. For communication competence, this implies that form in the use of language may be as important as content.

Concerning semantics, Hopper and Naremore (1973) state that "one of the least understood aspects of children's development is how meanings come to be attached to language structure" (p. 51). We know little about the developmental processes by which words come to have meaning. According to some research, reported by Hopper and Naremore, word meanings appear to develop for the child in three stages. First, single words have the meaning of entire sentences (holophrastic utterances). "Cookie" might mean "I have a cookie," "give me a cookie," "there is a cookie," and so on. Second, with grammatical speech (about age two or three), words have incomplete definitions. For example, a child might know that "ball" refers to a spherical object that is thrown and may have no idea that the word means something different in the sentence "Cinderella went to the ball" (Hopper and Naremore 1973). The child might assume that Cinderella approached the round object. Third, at age seven or eight, words take on adult meanings. Semantic development, somewhat like syntax and not at all like phonology, seems never to end. People's perceptions of the meanings of words change with age, social change, and other factors, throughout the life span.

The fourth area of language development, pragmatics, is the primary focus of this chapter. Pragmatics, the use of language, is an especially important part of a

child's linguistic and communicative development. Many writers are beginning to place much greater emphasis in education on the "use" of language rather than on grammatical correctness. Hymes (1970) states that, "not grammar, but the art of speech is the core and starting point of the description of the place of language in human life" (p. 7). Naremore (1976) states, "It is important to remember that language forms, nouns and verbs, complex sentences, phonological patterns, do not exist in a vacuum. Language is a tool that we use to communicate" (p. 21). Research also supports the view that use is central to language development. Bates (1967) predicted the order of acquisition of some syntactic rules on the basis of the complexity of the rules. The results were the direct opposite of predictions. She concluded that the child's progress in language acquisition is more a result of language strategies than the rules of grammar. This view and some of its educational implications are taken by Williams and Naremore (1969):

> However, much that is currently written with the orientation upon language differences, places stress upon language form at the expense of language function. The consequence is that compensatory programs, just as in much language instruction in the elementary school, place emphasis upon the learning of new language forms and it is not always clear just how functionally relevant such forms are to the child. (P. 100)

Looking at children's speech from this perspective requires us to ask questions like: What is the child going to communicate? How do details of linguistic and extralinguistic codes enter into actual speaking situations? How can we examine the development of the child's knowledge of when and how to use language?

Researchers in speech communication and sociology have reported that there are rules of social interaction quite similar to the rules of language. For example, we do not generally use "foul" language around grandmothers. Various social situations prescribe the kind of language used; we learn the "protocol" of various situations.

Hopper and Naremore (1973) describe the relationship between rules of grammar and rules of usage as being similar to the relationship between the rules in a game of chess and the strategies that allow a person to become a good player. We can learn all the moves in a few minutes, but it may take years to learn to play the game well. Similarly, a child learns most of the rules of grammar in the first few years of life. But it is only after several years of experience with various speech situations that the child's patterns of usage resemble those of adults. There is no end to this learning. It continues throughout life.

Hopper and Naremore go on to say that learning to talk is an interplay between learning bits of grammar and bits of appropriate usage. A child learns a rule of grammar only when he or she finds a use for it. In this way, situational

variables have a major impact upon the kind of language a child learns. One of the most well known developments of this idea is found in the work of Bernstein (1960, 1971). He has identified two basic divisions in linguistic code: restricted and elaborated. A restricted code is described as one in which the situational meanings of the message remain implicit. This is an economical mode of communication among people who share viewpoints and contexts. Elaborated codes, on the other hand, assume no context similarity but attempt to specify clearly the context for each piece of information. The person using the elaborated code does not assume that the listener shares the same context and perception. For example, consider the following stories told by two children in response to a series of pictures:

> 1. Three boys are playing football and one kicks the ball and it goes through the window. The ball breaks the window and the boys are looking at it and a man comes out and shouts at them and then that lady looks out of her window and she tells the boys off.
>
> 2. They're playing football and he kicks it and it goes through there and breaks it and they're looking at it and he comes out and shouts at them because they have broken it so they run away and she looks out and then tells them off. (Bernstein 1971; p. 45)

It is not necessary to have the picture to understand what the first child is talking about. With the second story, however, we are forced to ask such questions as "what goes through where?" and "who's looking at what?" The child telling this story is telling it as though the listener shared the context. The first child establishes a shared context through language and makes the meaning of the story understandable. This is an elaborated code. The second child assumes that the listener shares the context; the meaning is particular to the content and, thus, is restricted. It is not that the two children differ in their knowledge of the language forms; it is that they differ in the way they use the language.

It is also important to note that different subcultures approach language learning quite differently. Middle-class parents use language to instruct, to discipline, to maintain contact with children (Naremore 1976). As Ward (1971) reports, some parents take a very different approach. They may express the attitude that children should talk only if they are requested to do so or only if they have relevant information. Parents in this type of culture feel no need to teach their children to talk. As Ward states, "After all, the child will learn to talk—all children within [the mother's] experience have. She is more concerned about overt behavior, not his speaking ability" (p. 55).

These differences in the way language is taught in the home and in the way usage is learned by children, lead to some difficulties in assessing children's

language. As Naremore (1976) reports:

> It would not be at all unusual for an adult to approach a child playing with blocks and say "What are you doing?" with the full expectation that the child would answer. If the child did not answer even after several questions had been tried, the adult would probably assume that a) the child couldn't hear, b) he couldn't speak English, c) the child lacked normal intelligence, or d) the child was being deliberately rude. (P. 21)

The true explanation might be that the child and the adult simply did not share the same assumptions about what it means when you don't answer questions. The child's failure to respond is seen as a function of inadequate environmental stimuli, inadequate language skill, or cognitive deficiency. It is seldom seen as a function of something entirely different, a difference in interpretation of the communicative demands of the situation.

With these four areas of language development briefly outlined, and with emphasis on the role of language in functional communication skills, we are ready to move onto a brief discussion of educational goals in the area of language development that are consistent with our perspective.

Goals of language education

The following examples are not meant to be exhaustive. We merely wish to give the reader a sample of the types of goals that are consistent with the point of view we are presenting here. This list of developmental steps incorporating language and communicative function is abstracted from Allen and Brown (1976; pp. 182–185).

Ages 3–5. The child can:

Code

1. Produce most phonemes accurately.
2. Use morphological rules to express inflection changes.
3. Use the major transformations.

Culture

1. Respond in different manners to a variety of verbal communication.
2. Identify self in communication roles.

Function

1. Integrate verbal and nonverbal strategies.
2. Respond to persuasive probes.
3. Use opinion in conversation to support claims.
4. Communicate referentially with familiar objects and familiar language.
5. Use language to adapt to the listener.

6. "Try on" roles to see what it would be like to be someone else in relationship to another.

Ages 5–9. The child can:

Code

1. Use complex syntactic structures.
2. Produce all phonemes accurately.
3. Recognize semantic nuance, as well as denotation.

Culture

1. Produce bidialectical utterances, if the base dialect is nonstandard.
2. Respond to questions and answers in the classroom in ways appropriate to the dialect of the child's own language community.
3. Respond to status and power relationships in the communication situation.

Function

1. Demonstrate the ability to empathize, both in source and receiver roles.
2. Distinguish, when prompted, another's point of view.
3. Select relevant communication from irrelevant and respond to it accurately.
4. Make abstract and concrete associations.
5. Cast self and others into appropriate interpersonal communication roles and use those roles to further personal goals.
6. Describe, explain, and make inferences regarding unexpressed thoughts, feelings, and intentions of others.
7. Formulate hypotheses and explanations about concrete matters.
8. Create more-unified dramatic improvisations.

Ages 12–18. The child can:

Code

1. Evaluate emotional states on the basis of verbal and nonverbal communication.

Culture

1. Assume a variety of communication roles in his or her peer culture of the language community.
2. Read social-class differences from the nonverbal and verbal communication of others.

Function

1. Analyze persuasive messages in relation to their source.
2. Evaluate a message critically.
3. Play a variety of communication roles: listener, interlocutor, responder, and so on.
4. Select and describe the relevant attributes of a phenomenon or object in such a way as to facilitate understanding or choices for others.
5. Respond to the needs of a listener, in order to make a message comprehensible.

6. Provide feedback and adjust messages to the feedback of others.
7. Predict the potential effectiveness of messages.
8. Provide alternative encodings.
9. Conceptualize one's own thoughts and the thoughts of others.
10. Reason abstractly.

The foregoing are linguistic functions that students in the indicated age ranges could reasonably be expected to perform. With this sample of goals in mind, we can turn to some educational implications of this point of view.

Educational implications

In discussing educational implications, some assumptions that might guide communicative educators need to be identified. The following are abstracted from Allen and Brown (1976; pp. 241–251).

1. Communication educators are primarily interested in the pragmatics of communication. As educators, our major concern is with the development of the child as a message strategist. This is not to suggest that syntax, semantics, and sound production are not important or essential to the practical use of language. Rather, the child's acquisition of the rules, norms, and conventions of how language is used may not be ignored or relegated to a small corner of the curriculum.

2. Communication competence is not tied to competence in a particular form of language. Children must learn to master rules for communicating with people who are important to them, and this mastery does not hinge on any particular form of language.

3. Communication behaviors of children can be modified by training and by education.

4. Communication educators should be child centered in their educational perspectives. Rather than asking the general question "What should we teach in our classrooms?" one might ask "What does this student need to learn, in order to function more effectively?" Communication instruction should be addressed to the everyday communication needs of the child.

5. Communication instruction should emphasize the interactive nature of communication. Children must develop a sense of the behaviors that are appropriate to a myriad of communication

situations involving a variety of other people. The cultivation of a "sense of appropriateness"—an awareness of appropriate behavior for the self and others—is critical to communication education.

These assumptions make it relatively clear that the focus of language-development education should emphasize not only correct or "standard" language performance but also the use of language in various communication situations. We are concerned with developing communication skills in the student so that he or she may be able to choose the appropriate communicative behavior in a given situation and may exhibit that behavior in an effective manner.

We are not arguing against the inclusion of "grammar" in a language program. But there is evidence (Cazden 1972; Naremore 1976) to indicate that conscious, overt instruction is not necessarily useful in helping a child attain a basic knowledge of grammar (or of phonology, syntax, or semantics). We do not know enough to design such programs intelligently, and, given the present state of knowledge, such programs may actually prove harmful (Cazden 1972). We would suggest, however, that, in our language arts programs, form might follow function. That is, by clearly tying knowledge of language form to specific language function, the student might understand more clearly the reason for knowing the language form. The student's linguistic competence would develop through expanded experience with linguistic performance, and not vice versa. The focus on functional competence would help language education to "make sense" to the student.

One of the most-crucial points here for educational purposes concerns children who have come from very different environments. These children have been exposed to different kinds of communication situations and to different sets of expectations for what is appropriate communicative behavior. For some children, the family norms and the norms of society coincide, thus reinforcing each other. For other children, the norms of the family will be different from those of mainstream culture. These children are most likely to encounter communication problems in schools (Naremore 1976). We have to ask, "What are the implications of the fact that different groups in society have different notions of communication competence?" Variation in language use is a fact of life in United States society. This fact imposes a pressing demand on the educational system.

As every communication interaction occurs within a particular setting, we cannot neglect the influence of the context in developing educational strategies. A number of researchers (Hymes 1967a; Labov 1972; Cazden 1970) have noted that social situations influence both how a child demonstrates language knowledge on any occasion and how a child learns to speak in general. The situation, to an extent, dictates which communication patterns are appropriate. If a child who has learned a particular style of communicating is to change his or her

ways of using the language, then the language and communication patterns must become objects of awareness. The context can be analyzed to determine the contextually appropriate communication pattern. Educational strategies might move in the direction of comparative communication patterns for various situations. These efforts would help the student to select, implement, and evaluate communication resources for appropriate use in a given situation.

We know that patterns of language use are part of a complex system of cultural expectations, communication situations, and social roles. It is no easy task to help a child use language more effectively. It may be that educational instruction, as practiced now, cannot successfully intervene in this complex set of systems. It may be that, if we want to change the way a child uses language, we must either remove the child from the environment that gave rise to those language patterns or cause the child to want to leave that environment. This, of course, does not mean that nothing can be done to change a child's language behavior. It simply means that the changes we attempt should grow from a strategy more carefully reasoned than are most of the strategies we employ presently. Naremore writes:

> What it does mean is that our approach should be directed toward helping children (and ourselves) to see the relation between language and the situation in which it is used, and helping children understand that concept of "appropriateness" may be culturally bound, even if the concept of "correctness" is not. (P. 33)

Assessing language communication development

There are a variety of instrument summaries included in part II of this volume that assess various aspects of language development as it relates to communicative behavior. The instruments are focused primarily, though not exclusively, on language use. For a more-complete description of assessment instruments for all areas of language, the reader is referred to William T. Fagan, Charles R. Cooper, and Julie M. Jensen, *Measures for Research and Evaluation in the English Language Arts* (1975).

The instruments in part II can be divided into three general classifications. (1) There is a variety of instruments that attempt to assess the development of language knowledge. Most of these instruments allow an individual child's score to be compared with norms obtained from samples or inferred from prior research. This comparison allows the examiner to determine whether or not a child is developing "normally" in a variety of aspects of language knowledge. These instruments include the Verbal Language Development Scale; the Utah Test of Language Development, revised edition; the Language Ability Test; the Illinois Test of Psycholinguistic Ability; the Infant Adaptation Scale; the Houston Test of Language Development; the Communication Evaluation Chart from

Infancy to Five Years; the Metropolitan Readiness Test; and the Basic Concept Inventory. (2) There is also a variety of instruments that concentrate more on the development of specific language skills and their use in specific situations. These instruments concentrate on the ability of the child to use the language appropriately; they include the Children's Language Assessment Situational Tasks, Clozentropy English Language Proficiency, the Language Communication Skills Task, the Test of Linguistic Ambiguity, and the Vance Language Skills Test. (3) Two instruments included in part II assess language comprehension exclusively. One advantage of these instruments is that they do not require well-developed expressive abilities in the child. All the child must be able to do is to point at the correct response. These tests are useful in assessing the knowledge of children who have expression difficulties. Instruments in this area include the Peabody Picture Vocabulary Test and the Assessment of Children's Language Comprehension.

The instruments are also divided by age group. The reader is referred to the grid presented at the beginning of part II.

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Interpersonal Competence

In chapter two, we briefly differentiated effectiveness, appropriateness, and interpersonal competence from communication competence. This was done in order to provide a clearer conceptualization of communication competence.

Our attention now turns to examining these three concepts in terms of what they may contribute to our understanding of communication competence. Of the three, interpersonal competence is the most encompassing; it requires appropriate behavior, and it is assessed in terms of personal effectiveness. The relationship between interpersonal competence and communication competence is central to our concerns. Interpersonal competence requires communication competence; it includes a wider variety of skills that are directly attributable to the existence of communication competence. Communication competence provides tools that the individual can develop toward particular ends, and those ends are interpersonal competence.

In chapter two we reviewed some of the definitions of interpersonal competence. At this time, we will examine in more detail how it has been conceptualized and the types of skills that are included within its framework.

Interpersonal competence is sometimes referred to as social competence. The two terms are often used interchangeably because both of them describe competence in interaction with the environment or, more specifically, with other members of society. Because of the importance of being able to relate to one's environment in an effective manner, interpersonal competence has received attention as a basic educational goal. Bochner and Kelly (1974) have developed a conceptual framework to which they have applied an instructional strategy for the improvement of interpersonal competence. This strategy is based upon two key assumptions:

> 1. Every human being is motivated to interact effectively with the environment; the drive to be interpersonally competent is the drive to influence one's world. (P. 286)
>
> 2. Individuals are not effective at birth; social effectiveness is learned throughout life. (P. 288)

From these assumptions, Bochner and Kelly identified the skills that contribute to an individual's interpersonal competence. Those skills include empathic communication, descriptiveness ("the manner in which learners give and receive feedback"; p. 290), owning feelings and thoughts, self-disclosure, and behavioral flexibility ("an individual's capacity to relate in new ways when necessary"; p. 291).

Chris Argyris (1965a, 1965b, 1965c) has developed interpersonal "levels" composed of categories and norms that are very similar to Bochner and Kelly's interpersonal–competence skills. The following table presents these two levels: level one is individual or interpersonal aspects; level two is social or cultural aspects—the norms.

Categories of behavior related to organizational effectiveness

	LEVEL ONE		LEVEL TWO				
	Individual	*Interpersonal*	*Norms*				*Outputs*
	Experimenting	*i* / *f* Help others to experiment	*i* / *f* Trust	*i* / *f*	Performance Difficulty		
Plus	Openness	*i* / *f* Help others to be open	*i* / *f* Concern	*i* / *f*			Effectiveness increased
	Owning	*i* / *f* Help others to own	*i* / *f* Individuality	*i* / *f*			
Zero							
	Not owning	*i* / *f* Not help others to own	*i* / *f* Conformity	*i* / *f*	Defensiveness		
Minus	Lacking openness	*i* / *f* Not help others to be open	*i* / *f* Antagonism	*i* / *f*			Effectiveness decreased
	Rejecting experimentation	*i* / *f* Not help others to experiment	*i* / *f* Mistrust	*i* / *f*			

SOURCE: Adapted from Chris Argyris (1965a; p. 60).

For each category, Argyris assumes an emotional, or feeling, component (*f*) and an ideational component (*i*). Using this system, he developed a scale for observers to use for scoring the interpersonally competent behavior of individuals in a group setting.

Weinstein (1975) draws from the two approaches of the interactionists in establishing a framework for interpersonal competence. One approach focuses upon "the goals and sees interaction as the exchange of rewards and costs" (p. 754). The concern seems to be with effectiveness. "The second approach is not so much concerned with the purposes of participants in interaction as it is with the character of interchange between the actors and the episode of interaction in which they are engaged" (p. 754). His framework includes elements of both approaches, with a stronger inclination toward the latter.

The following is a condensation of the concepts constituting his framework:

> *Interpersonal task*: that response or set of responses that the individual is attempting to elicit from an alter ego. It is assumed that in a given encounter, an actor has a set of interpersonal tasks, each having a theoretically specifiable reward value.
> *Interpersonal competence*: the ability to accomplish interpersonal tasks. This is no more than saying that interpersonal competence boils down to the ability to manipulate others' responses.

Lines of action: those activities of ego, directed toward an alter ego's perception, designed to elicit the task response from the alter ego. While a good many of the things we do to affect the behavior of others may be the result of rational reflection, we may be unaware of many of the tactics we use. Nor are we necessarily aware of the interpersonal tasks our behavior serves.
Encounter: any contact between persons involving an interpersonal task on the part of at least one participant.
Situation: all stimuli present in an encounter, at any given time, that are potentially meaningful (that is, possess symbolic content) for one or more of the participants.
Defining the situation: the process of selecting and organizing stimuli in the situation into a coherent whole.

Besides these concepts, Weinstein also deals with the projected definition of the situation, the working consensus, the situational identity, and identity bargaining. He describes the development of a repertoire of tactics that he feels are essential to controlling the responses of others and, therefore, essential to interpersonal competence. He ties these elements together in his conclusion:

> Socialization for competence may be a misnomer. Specific training in role acquisition of norms and in learning to take the role of others is often directed at enabling the child to behave appropriately, and not necessarily effectively. (P. 773)

John Wiemann (1976) developed a model of communication competence that, by our definitions, is really a description of the communication involved in interpersonal competence. He described the competent interactant as

> other oriented to the extent that he is open (available) to receive messages from others, does not provoke anxiety in others by exhibiting anxiety himself, is empathic, has a large enough repertoire to allow him to meet the demands of changing situations, and, finally, is supportive of the faces of his fellow interactants present. (P. 7)

Later, he described the communicatively competent individual in terms of accomplishing her or his own interpersonal goals, which seems to be a description of what we have called effectiveness. Wiemann identified five dimensions of communication competence: affiliation/support, social relaxation, empathy, behavioral flexibility, and interaction-management skills. These dimensions reflect the types of skills described by Bochner and Kelly, Argyris, and Weinstein.

Wiemann sees interaction management as the central dimension of communication competence. Interaction management includes "initiation and termination of encounter, the allocation of speaking turns, and control of topics discussed" (p. 9–10). He describes interaction-management skills as fundamental to the performance of behaviors specified by the interaction rules of a culture.

Underlying interaction management are the rules that govern face-to-face encounters. These rules, like the lines of action of Weinstein, are concerned with "how a person comports himself (demeanor) and how he deals with (i.e. the regard he shows) others (deference)" (Wiemann 1976; p. 10).

Foote and Cottrell (1955) examined interpersonal competence in terms of the skills or abilities underlying the power to manipulate others' responses. These skills are based upon an analysis of the type of personality that might develop as interpersonally competent. Following this logic they identified the constituent dimensions: autonomy, creativity, empathy, health, intelligence, and judgment. Though some of these seem to be far removed from our interest in communication, several of the dimensions presented are relevant—notably empathy.

Interpersonal competence has been conceptualized in terms of success, accomplishment, and effectiveness. But how is effectiveness assessed, and what is considered effective? A person can be effective without being appropriate. One might not abide by the socially prescribed rules of interaction but still may achieve the goal and get the message across. Likewise, one could behave appropriately without achieving personal goals.

Effectiveness can be examined from the perspective of the speaker, the listener, or an observer. From the speaker's perspective, effectiveness is the degree to which his or her goals are attained. From the listener's perspective, effectiveness is the degree of accuracy of understanding the speaker's intended message. From an observer's perspective, effectiveness could be accuracy, attraction, influence, or any other criterion. McCroskey, Larson, and Knapp (1971) explain three possible outcomes:

> In some cases communication will have been effective if the individuals involved have arrived at a greater mutual understanding of attitudes, sentiments, opinions, etc. In other situations, communication will have been effective if the attitudes or beliefs of one or both parties change as a consequence of the interpersonal encounter. In still other situations, we are interested primarily in being liked or evaluated favorably by another. (P. 15)

Often the conceptualization of effectiveness is tied directly to the way in which it is to be measured. Effectiveness then becomes defined in terms of some criteria by which behavior is being evaluated. Carkhuff (1969) defined effectiveness in a counseling situation in terms of how well a person fulfilled the eight criteria Carkhuff established. Giffin and Patton (1971) presented eight sugges-

tions by which effectiveness could be attained. These are, in essence, criteria by which effectiveness is defined. Jain (1973) defined effectiveness for hospital supervisors' communication in terms of five indices. These indices generally were concerned with the amount and accuracy of knowledge or information the subordinates received. Thus, because communication effectiveness is conceptualized in many different ways, the definition of communication effectiveness is frequently an operational one.

With respect to interpersonal competence and the related concepts appropriateness and effectiveness, there is considerable potential for confusion in the movement from theoretical definitions to operational ones. For this reason, it is important to be familiar with the theoretical base of the instrument you choose. If you choose a particular form for analyzing communication effectiveness, you accept the theoretical dimension that instrument represents. If you don't believe that "willingness to disclose" is an important dimension of communication effectiveness, then Carkhuff's rating scales will not be appropriate to your itnerests. Measures of appropriateness are even more subject to theoretical operational confusion because the assumptions on which these types of measures are based are fairly subjective. Several of the measures reviewed later (Sentence Completion Form, Nonverbal Measure of Children's Frustration Response, and Situational Exercises) grow from an assumption concerning the undesirability of aggressive behavior. To the extent that this assumption is consistent with your own conceptualization of communication appropriateness, you may wish to examine these measures.

Appropriateness, as we mentioned in chapter 2, is tied to three contexts: the verbal context, the relationship context, and the environmental context. Assessment procedures are usually directed toward one of these contexts. Thus, you must consider what context you want to assess and determine which instrument assesses that context.

Two forms of interaction analysis of interpersonal competence are the Modes of Speech Continuum and the Social Competence Scale. The former evaluates children's responses to specific probes. The responses are evaluated in terms of seven functional uses, each representing a higher degree of sophistication on the part of the user. These seven functional uses are contactual, conversational, descriptive, directive, explanative, narrative, and persuasive. These represent the repertoire of responses that the interpersonally competent child is expected to exhibit.

The Social Competence Scale was developed to distinguish "normal" from "emotionally disturbed" children. Interest/participation versus apathy/withdrawal and cooperation/compliance versus anger/defiance are the two continua used for the analysis. The theoretical base places more weight upon appropriateness-versus-effectiveness as the root of interpersonal competence.

The Interpersonal Competence Scoring System and the Palo Alto Group Therapy Scale are adult versions of attempts to analyze the communicative

competence of individuals. Both focus on an individual's behavior in a group setting. They are, therefore, contextually bound, and the assessments made may be limited in their generalizability to other situations.

The Social Adjustment Behavior Rating Scale makes a further evaluative statement about the adequacy of the social interaction demonstrated by an individual. The scale was developed as a clinical diagnostic instrument. It includes the theoretical assumption that an extremely low interaction is unhealthy or abnormal, and it involves ratings by professional clinicians of a subject's interaction.

Carkhuff's Rating Scale and the Communication Rating Scale also evaluate an individual's interaction behavior from theoretical perspectives associated with a counseling context. The Carkhuff scales have been widely used, probably because the theoretical base underlying the measure is so well established and fits interpersonal communication contexts other than counseling.

The Purdue Basic Oral Communication Evaluation Form was developed to assess a subject's communication effectiveness, predominantly for business or organizational settings. This instrument uses an interview situation to which a set of criteria are applied by an interviewer in evaluating the subject's communicative behavior. Interviewer ratings on this scale differentiate between successful and less-successful supervisors, which tends to reinforce the relationship between goal achievement and communicative effectiveness.

The Interpersonal Checklist and the Biographical Survey III Scale are self-report instruments designed to evaluate personality in terms of those attributes that are contributory to interpersonal competence. The checklist seeks a person's evaluation of self, and the person's evaluation of target persons, in terms of eight pairs of variables: blunt/aggressive, competitive/exploitive, managerial/autocratic, responsible/overgenerous, cooperative/overconventional, docile/dependent, modest/self-effacing, and skeptical/distrustful. Derived from the theories of Timothy Leary, the variable encompass many of the elements we discussed with respect to the conceptualizations of interpersonal competence.

The Biographical Survey operationalizes social competence in terms of demographic information about the subject. It contains many assumptions about what is socially desirable and what contributes to interpersonal competence. Information recorded on this instrument includes participation in organizing and directing group activities, history of frequent and positive social interaction with both sexes, and ability to discipline oneself.

The Personal Orientation Inventory and the Interpersonal Communication Inventory include self-report measures of success in carrying on interpersonal relationships. The Personal Orientation Inventory has a subscale that is aimed at determining the "capacity for intimate contact." It was developed from theories of self-actualization, most of which describe self-actualization as related to interpersonal competence.

The Interpersonal Communication Inventory includes items about the ability to listen, to understand, to empathize, to handle angry feelings, and to express onself, as well as conversational attributes.

From this review, two cautions should be apparent. First, it is important to bear in mind the target group for which the instrument was designed. Second, especially for measures of competence and of appropriateness, one must bear in mind the time at which the measure was designed and tested. Since we are concerned with social appropriateness and social competence, we are dealing with concepts that derive their very nature from the social norms of the day. Thus, what may have been an appropriate behavior when the test was constructed may not be at the time you use it. The instruments we have included that deal with children's interpersonal competence are from a post-1970 period and should be free of this problem, but those for adults date back fifteen years and should be examined more carefully.

The three sets of measures we have covered here, appropriateness, effectiveness, and interpersonal competence, were placed together because of their similar derivation from social and cultural standards. In addition, the techniques of assessment and the operational definitions of the three were found to exhibit considerable similarity. Perhaps more than any other dimension of functional communication, interpersonal competence requires special attention to the way in which a particular instrument assesses its specific concepts.

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Listening

The communication process, and a person's ability to use that process, can be examined from a wide variety of perspectives. A large percentage of those perspectives, including a majority of the dimensions discussed in this volume, are directed to the expressive abilities of the individual. Yet we also need to examine the individual as a receiver of messages. The individual's receptive abilities, abilities to gather information from the environment and from other people, are a significant factor in that individual's ability to act in a competent communicative manner.

Indeed, a number of writers argue that the act of communication begins with this ability to gather information. Dance and Larson (1972) describe communication as occurring when an organism "acts upon information" (p. 11). Any individual is surrounded by a great variety of stimuli, and the individual's ability to select certain of those stimuli to use as information is critical to survival. As the individual does this, it can be said that the organism is communicating with its environment. Thayer (1968) discusses communication as occurring when the individual "takes something into account." He further divides this into two aspects: the individual's *ability* to take something into account and *susceptibility* to taking something into account. Thus he is concerned with the conscious ability to take something into account and with what the individual is likely to take into account. From this perspective, we might say that communication between people does not take place until reception occurs, until the receiver attends to, or acts on, information. Such a perspective implies that the individual's ability to act competently in the environment is highly dependent upon the ability to acquire the necessary information about that environment.

The purpose of this chapter is to examine one part of the information-acquisition process, the process of listening. We will examine the relationship between listening and functional communication competence. To accomplish this, the chapter will be divided into five parts: (1) a description of the process of listening, (2) a description of the levels and types of listening, (3) a description of commonly identified barriers to functional listening, (4) a description of commonly identified attributes of an effective listener, and (5) issues surrounding the assessment of listening.

Description of listening process

Before discussing the types and levels of listening, some points may be raised concerning the importance of listening in everyday interaction and of some of the factors that influence that interaction. These points include listening as a communication event, the effect of listening on interaction, the selectivity and purposiveness of listening, and the interpretive quality of listening. A discussion

of these points may help us obtain a clearer picture of the role of listening in the functional communication process.

Listening as a significant communicative event. As was indicated in the introduction to this chapter, information reception and acquisition appears to form a significant part of the communication process. Listening, as part of that process, plays an important role in the acquisition of information that subsequently allows for functional and appropriate communicative interaction. Indeed, some researchers estimate that we spend more time engaged in listening than in any other communication event. Estimates of our time that is spent in listening range from forty-two percent to sixty-five percent. The point appears to be that we spend a considerable amount of time in receiving messages rather than producing them. Thus, as Barker (1971) claims, listening may be the most-important communicative activity we engage in. As such, it apparently needs to occupy a central place in any consideration of communication competence.

Listening as affecting interaction. If listening seems to occupy such a large percentage of our communication time, we may surmise that it has a proportionate effect on interaction. This effect may be examined from a number of points. One point appears to be that the listener has at least as much control over the success of message transfer between people as does the sender. One person can talk to another person, but, until that second person attends to the first person, little in terms of competent communication will occur. This listener contributes to and, to an extent, controls the communication process. If we accept this as true, then competent communication can be seen as a mutual process, engaged in by both the sender and the receiver, who share the responsibility for the creation of meaning in the interaction. A second point, an extension of the first, stems from the belief expressed in encounter and interpersonal literature (Egan 1970) that the way in which a person listens to another will govern the type of relationship that will develop between the listener and the speaker. A person who listens closely, attentively, and supportively to someone will develop a much different relationship with that person than will someone who listens in a superficial, closed, or critical manner. Such a view of listening places a great deal of emphasis on the amount of influence the process of listening exerts on everyday communicative interaction.

Listening as interpretive. The listener cannot be looked on as a passive receiver of words. The listener actively interprets words on the basis of his or her own mental processes, goals, and needs. This process may be likened to a filter. The listener hears the words but "filters" them through her or his own cognitive processes. A number of variables make up this filter. One of the most pervasive is the language itself. For accurate interpretation to take place, there must be a common language between the speaker and listener. The speaker uses the language as he or she understands it, but there can be an exchange of meaning only if the listener understands the language in a similar manner. One may

observe countless examples of individuals who hear the words of another person but interpret them in a manner quite different from the way the speaker intended. Accurate, functional listening depends, to an extent, on the degree to which the communicators share a system of symbols. Another aspect of the interpretive process of listening is the verbal mental structure of the listener. A number of writers (such as Kelly 1963; Burke 1969) discuss the verbal mental structure of an individual and how this structure may influence the way in which the listener will interpret the message received. This process, as Burke says, is both a selection and a deflection of reality. The fact that the listener interprets what is heard serves as an aid to the listener and as a very real, potential barrier to accurate and competent communication.

Listening as selective. If listening is interpretive, then it can also be seen as selective. To support this point, we first may make a distinction between listening and hearing. Hearing can be described as a basic physiological function through which the ear senses waves of pressure in the air and perceives them as sound. Listening is generally considered to be an active process, by which the individual selects a portion of the available sounds to which to attend. The listener's selection is purposeful. The more clear or important is the listener's purpose, the higher the level of attention. Ittleson and Contril (1967) state, "There is no attention without intention" (p. 213). The point here is that listening is an active process, a process that is, in part, controlled by the listener on the basis of what the listener needs or requires in the situation. We may make the important note that listening can be seen as a skill or an ability rather than a sense. As a skill, it can be learned. To understand the skill of listening, we need to understand the selection process involved. It appears to be influenced by the mental makeup of the listener, his or her openness, view of the importance of the information (providing rewards, reducing dissonance, and so on), and opinion of the speaker.

Types of listening

The preceding points can be seen as introducing the distinctions that need to be made among the levels and types of listening. These distinctions will allow us to describe the listening process in more detail and to point out areas of educational implications. The types of listening that will be described include active/passive, social/serious, critical and discriminating, total listening, and inner listening.

Active/Passive. The distinction between the first two types of listening, active and passive, is similar to the distinction between hearing and listening. Barabara (1957) differentiated between active and passive listening in the following manner:

> In the former, the individual listens with more or less his total self—including his special senses, attitudes, beliefs, feelings, and intuitions.

> In the latter, the listener becomes mainly an organ for the passive reception of sound, with little self perception, personal involvement, gestalt discrimination, or active curiosity

Barker (1971) saw active listening as involving the total organism, including all of the senses, in an effort to gain the maximum amount of information. Rogers (1951, 1961) discusses active listening as an essential ability for therapists. The active listener tries to gather as much information as possible in a particular setting. This can be contrasted with the passive listener, who is merely receiving sounds with little recognition or involvement, who simply happens to be present when someone else is talking.

Social/Serious. A second major distinction can be made between social listening and serious listening. Social listening can be described generally as taking place in a context designated for enjoyment, such as a party. Barker (1971) listed four subtypes of social listening. First, appreciative listening is nonconversational listening, such as listening to a play, a concert, a poem read aloud, or a television program. Second, conversational listening involves the two-way process of communication in informal social settings. Third, courteous listening involves conversation but is generally practiced in communication settings in which the listener serves primarily as a listener. (Being a courteous listener is difficult, inasmuch as the listener may be interested in presenting his or her own point of view.) In courteous listening, such as is needed when trying to counsel a friend or serving as a sounding board for ideas, one is expected to devote attention to the speaker and to provide feedback. Fourth, listening to indicate respect or love involves listening to confirm, to recognize the worth of the speaker, and to support that worth: A parent may take the time to listen to something a child says that is not important to the parent, but that is very important to the child. These four divisions, for Barker, make up the different levels of social listening.

Serious listening, on the other hand, is oriented toward learning and toward gathering crucial information (Homer 1973). Four dimensions of serious listening are selective listening, concentrated listening, critical listening, and discriminating listening. Selective listening involves listening only to segments of a message. By listening selectively, a person can "tune out" useless information. The danger here is, however, that the listener will miss something important. Concentrated listening, on the other hand, involves listening to the entire message and attempting to comprehend all of its aspects. The listener's response to the speaker may be to internalize the message and to classify and store information according to needs and perceived purposes.

Critical listening has been described by Barker as

> listening in which the message receiver attempts to analyze the evidence or ideas presented by the speaker and make critical

> judgments about the validity and quality of materials presented. Critical listening involves a variety of skills, such as distinguishing between fact and opinion, distinguishing between emotional and logical arguments, detecting bias and prejudice, etc. (P. 12)

Critical listening, then, is responding to a message in an evaluative manner. The listener makes judgments about the message and the speaker, concentrating upon specific attributes and choosing what to discard and what to retain (Keltner 1970). This act of concentrating on a message could be regarded as an effort to hear beyond the superficial level of talk, to infer through the words the inner meaning of the speaker (Homer 1973). The critical listener concentrates on understanding and evaluating the message.

Discriminating listening is listening for the purpose of understanding and remembering. This type of listening involves such skills as understanding the meaning of words from their context, understanding the relationship of details to the main point, listening for details, listening to a question with intent to answer, and so on. Discriminating listening is divided into four levels. (1) Attentive listening, in which the primary goal is to attend to a message, (2) retentive listening, in which the intent is to comprehend and remember the message being presented, (3) reflective listening, in which the intent is not only to retain the information but to evaluate it, and (4) reactive listening, in which the intent is to give verbal and nonverbal feedback to the speaker, indicating an evaluation of, or a response to, the message.

Total or holistic listening. Total or holistic listening concentrates on understanding the speaker (Barvara 1966; Hamachek 1971). Egan (1970) states, "For our purposes, total listening means becoming aware of all the cues that the other emits, and this implies an openness to the totality of the communication of the other" (p. 248). For Egan, listening is not limited to hearing:

> One does not listen with just his ears, he listens with his eyes and with his sense of touch, he listens by becoming aware of the feelings and emotions that arise within himself because of his contact with others, he listens with his mind, his heart, and his imagination. He listens to the words of others, but he also listens to the messages that are buried in the words or encoded in all the cues that surround the words. (P. 248)

The listener that applies total listening accepts the speaker and seeks to know him or her on a deeper level, to become involved with the speaker's inner thoughts and being. The listener does this without condemning or praising (Rogers 1967a). The total listener, in contrast to the critical listener, seeks to fully understand the speaker in a nonevaluative manner, while the critical listener is one who attempts to concentrate on a critical evaluation of the message.

The difficulties of defining listening become obvious in this discussion of total listening. It might be argued that total listening is more than "listening," since the receiver is responding to nonvocal cues, as well as vocal ones. To accept the previous definition of total listening, one would have to expand the concept of listening to include the reception of all data through all the senses, not merely through the ears. In terms of communication competence, this conception of listening may be appropriate. In order to act competently, an individual must be able to respond to many cues beyond the verbal-vocal ones. This point will be dealt with at greater length when we discuss the issues that surround the concept of listening.

Inner listening. Inner listening can be described as the ability to listen to onself, to be aware of the messages arising internally. Homer (1973) identified this type of listening as the most difficult to achieve. Fromm (1956) believed that humans must learn to listen to themselves before they can listen to others; he believed that inner listening was vital in terms of man's relationship to man. Maslow (1962) has also written of the importance of inner listening, relating the idea of self-listening to the "inner core" of a person. Rogers and Farson (1969) viewed inner listening as part of the goal of psychotherapy, that is, teaching persons to listen to themselves. For Rogers, the causes of problems and barriers in listening to others are to be found in faulty or inadequate self-listening. This argument can be extended to communication competence. If one must act upon information in order to function competently, then one cannot afford to ignore information from within.

There has been a wide variety of literature written in the past decade about various techniques for achieving self-awareness. The apparent goal of most of these efforts is to help the individual improve the ability to attend to internal messages, to respond more clearly to the information given by body and mind. Inner listening and self-awareness, then, appear to be quite similar. The issue raised in the discussion of total listening applies here. Is inner listening really "listening"? There is no question that it is important to be aware of what is happening internally, but is that a legitimate aspect of the listening process?

These various types of listening can be seen as different ways in which the listening process can be approached. By studying types of listening, we may be able to expand our ability to gather the necessary information for competent communicative behavior.

One further point about the types of listening needs to be made. While it is useful to talk in terms of the various classification schemes discussed above, it should be emphasized that a given listening event rarely can be explained adequately by only one type of listening. Listening is a process and, as such, is subject to fluctuation and change. These various systems also point to a fundamental difficulty in researching and assessing listening. There is little agreement about just what listening "is." The boundaries between perception, cognitive constructs, open-mindedness, nonverbal sensitivity, intention, and

listening are still quite unclear. We do not know where one begins and another stops. For communication competence, perhaps the widest possible definition is necessary. If we are interested in completely understanding how a person can function in a competent manner, then we must examine all aspects of that person's receptive abilities. Until further research can more clearly delineate the dimensions of that receptive process, it may be appropriate to consider all the above dimensions under the general heading of "listening."

Barriers to effective listening

While there is little agreement about what listening is, this lack of agreement has not stopped theorists from attempting to identify barriers to good listening. If we are interested in teaching students to become more effective listeners, then it would be useful to examine some of the barriers to effective listening that have been identified.

Goffman (1967) discusses three kinds of preoccupations that interfere with the communication process. The kinds of alienation he describes actually interfere with the person's ability to listen to others, in the fullest sense of the term. The first kind of alienation is "external preoccupation." In this, the individual neglects the prescribed focus of attention and focuses instead on something unconnected with the conversation at hand. The second kind of alienation is "self-consciousness." This results from one's preoccupation with oneself as an interactant, which prevents giving oneself entirely to the topic of conversation. The third kind of alienation is "interaction consciousness." In this, the participant is so worried about how the interaction itself is going that his or her ability to follow the topic of conversation is constricted.

Campbell (1958) studied the communication process from the receiver's point of view and described certain potential sources of error:

1. Length of speaker's remarks. There is a good chance that the average listener will tend to shorten, simplify, and eliminate detail from the actual output of the speaker. The longer the remarks, the greater the "leakage."
2. The middle of the message. This is the part that will be least well retained.
3. "Rounding off" the message. A listener is likely to omit detail and create general classification of what the speaker is saying.
4. The past haunting imperfectly transmitted messages. Individuals tend to interpret messages in accordance with their past experience. Ambiguous messages will be interpreted in a manner similar to the way like messages have been interpreted in the past.

5. The reductive nature of listening. Individuals tend to modify a new message so that it becomes more like previous messages: "We've heard all this before," which may not be true. The active listener will look for the differences.
6. Hearing what one expects to hear. In general, listeners will modify messages so that they conform to the meaning expected by the listener.
7. "You agree with me." The listener tends to modify messages so that they are in better agreement with the listener's own opinions and attitudes.
8. "Black or white" listening. It seems almost natural for a person to listen to messages in evaluative terms, and it is much simpler to hear a communication as bad or good in its entirety rather than to spend the effort that differential evaluation of a message would demand.
9. The pressure of the group and "filtered" listening. When listening to a message with a group of people, one tends to distort the message to conform to other people's interpretation.

Barker (1971) also lists a number of barriers to effective listening:

1. Viewing the topic as uninteresting.
2. Criticizing a speaker's delivery instead of the message. This is allowing a preconception of the speaker as an individual to distort the perception of the message.
3. Getting overstimulated or emotionally involved.
4. Listening for facts only and not for other important aspects of the message.
5. Preparing to answer questions or points before fully understanding them.
6. Wasting the advantages of thought speed over speech speed.
7. Tolerating distractions or failing to adjust to them.
8. Faking attention.
9. Listening only to what is easy to understand.
10. Allowing emotion-laden words to interfere with listening.
11. Permitting personal prejudices or deep-seated convictions to impair comprehension or understanding.

These two lists are presented as examples of what two scholars believe to be barriers to effective listening. While disagreement about the definition of listening is common, one can readily see the value of considering these barriers, in order to improve.

Effective listening behavior

Scholars have also attempted to outline the aspects of effective listening behavior. Two such attempts are presented here to indicate the type of behavior that might help improve an individual's listening skill. The following list is from Barker (1971).

1. Be mentally and physically prepared to listen. Listening requires effort and preparation.
2. Think about the topic or situation in advance, when possible.
3. Determine the value of the topic for you.
4. Listen for main ideas.
5. Concentrate—do not let your thoughts wander.
6. Build your vocabulary as much as possible.
7. Be flexible in your views.
8. Compensate for emotion-rousing words.
9. Compensate for main ideas to which you react emotionally, by differing judgment, empathizing, and placing your own feelings in perspective.

Weaver (1972) also listed a number of tactics a listener could use to develop better listening skills.

1. You can reflect the message to the talker: give feedback.
2. You must guess the talker's intent or purpose.
3. You should strive to bring the quality of your habitual listening up to your optimal level.
4. You should try to determine whether your referents for the words used are the same as those of the speaker.
5. You should determine your purpose in every listening situation.
6. You should become aware of your own biases and attitudes.
7. You should learn to use your spare time well, as you listen.
8. You should analyze your listening errors.
9. You should learn as much as you can about the process of listening.

There are two primary reasons for presenting these lists. First, they are representative of the educational strategies advocated in two relatively new texts on listening. We might assume that these summarize the thinking on ways to improve listening. Second, the reader may notice that some of these suggestions, such as building vocabulary, being flexible, and giving feedback, are not closely related to the listening process. This may be indicative of a lack of knowledge

concerning the skills and dimensions of the listening process. These issues will be explored in more detail in the next section.

Issues in the assessment of listening

Researchers in listening have disagreed over virtually every aspect of the listening process, including defintion, dimensions, methods of assessment, and methods of improving listening ability. In fact, research in listening has slowed in recent years because these questions have not been resolved.

Three issues have been raised concerning the progress of listening research. The first concerns our ability to assess the listening ability of individuals. None of the current listening tests seem to show adequate levels of validity, and we are not certain that these tests actually measure listening. For example, the Brown-Carlsen Test of Listening Comprehension may measure recall ability rather than listening ability. Petrie (1964) claims that we have not conceptually defined listening clearly enough to assess it. Listening assessment is also confounded by the fact that most tests depend on the expressive abilities of those tested. This ability may directly affect scores on listening tests. The listening tests that are available may be useful, but the user is cautioned to be aware of the limitations surrounding each of the instruments.

A second issue concerns the unidimensional or multidimensional quality of listening. We do not know yet if there is one unique listening ability or many different variables that constitute listening. The previous descriptions of types of listening could lead one to suspect that there are, in fact, different kinds of listening abilities. But research has yet to clearly isolate the different types. Indeed, listening has yet to be defined in a manner acceptable to everyone. Egan (1970) sees listening as encompassing all the receptive abilities of the individual, through all of the senses. Others would claim that listening is restricted to what is heard with the ears. Until a clearer conception of listening is developed, these issues will go unresolved.

A third issue concerns the effectiveness of training methods for listening. We do not know precisely how to effectively increase someone's listening ability. Many teachers have successfully trained students to listen more clearly. Petrie (1964) makes the point that if we do not know what listening consists of, if we do not have instruments that assess it clearly, then we do not know why we are successful (if we are) in listening training. He suggests that listening training can be likened to conditioning a pigeon in one of Skinner's boxes. The pigeon scratches its head, jumps up and down three times, flutters its wings wildly, bumps into a lever, and is rewarded with a pellet of food. Consequently, it goes through the same routine—scratches its head, jumps three times, flutters its wings, bumps into a lever, and gets a reward—but it does not know what part of that program brought on the reward, so it repeats the entire pattern of behavior,

much of which is irrelevant to earning the reward. There is a variety of research evidence that indicates training in listening does not improve the ability to retain lecture material nor influence scholastic ability, grade-point average, or grades in lecture courses. There is a fair amount of controversy over these issues (see Petrie 1964; Duker 1964, 1966), yet, because the controversy exists, the issues must be considered.

These issues are echoed by other scholars. Bakon (1966) and Hackett (1966) both speak of the difficulty in separating listening from other psychological processes. For example, Hackett questions the difference between perception and listening: is listening actually perception through the sense of hearing? If so, do all the concepts and issues about perception also fit the concept of listening? The answers are not clear. Furthermore, what is the relationship of listening to various intellectual, motivational, and personality variables? Listening appears to be affected by these variables, yet the relationships between them are by no means clear. Hackett suggests that there may be a greater case for the teaching of logical thinking. Hackett points out that there is not enough evidence that listening can be taught, nor do we know enough about what we are teaching to be sure that we will have an effect.

These issues point to the confusion surrounding the listening process. Scholars have yet to clearly define listening and its relationship to the development of functional communication abilities in the individual. While it is clear that an individual must attend to information presented by other individuals and by the environment, there are many questions left to be answered by researchers.

For the purpose of communication competence, we believe it necessary to conceive of listening in the broadest terms. We are concerned with the individual's ability to act competently. That ability is predicated upon the individual's ability to gather information from the environment. Even though the definition of listening appears to be surrounded by some confusion, we recognize the importance of the information-gathering process. We need to understand how the individual accomplishes this and what abilities are involved. Until researchers can isolate the different aspects of this receptive ability and separate them from each other, we will need to approach listening in this sense—including the entire receptive ability of the individual—and from there attempt to subdivide that conception into manageable parts.

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Communication Apprehension and Speech Anxiety

This commentary will be divided into five parts. We will first examine what is meant by communication-apprehension/speech-anxiety. Second, we will give a rationale for including it and its assessment in a discussion of communication competence. Third, we will briefly discuss some issues about communication-apprehension/speech-anxiety that are relevent to communication competence. Fourth, we will discuss some of the different methods that have been developed to measure it and the advantages and disadvantages of those methods. Finally, we will discuss those measurements we have included in this volume.

Communication apprehension

Speech apprehension, speech anxiety, reticence, stage fright, communication apprehension, communication anxiety, and unwillingness to communicate are some of the terms used to describe a phenomenon related to the communication process. Tracing some of the definitions may lead to a clearer understanding of what we will refer to as communication apprehension.

Phillips (1968), in examining reticence in speaking, gives a description of what the "reticent communicator" is like:

> He is usually quiet, and tends to avoid interaction. He is reluctant to discuss ideas and problems with others and seems inordinately intimidated by subordinates. He rarely asks questions, does not socialize well, and physical upsets are often associated with his attempts to communicate. Though he may be able to handle minimal communicative requirements, face-to-face contact with others normally threatens him. He does not anticipate success in communication transactions involving speech. . . . He may or may not be consciously aware of what he has at stake when he communicates with others. He is quite aware, however, of his incapability and consequently seeks to avoid interactions rather than to participate. He knows that he does not react as others do in personalized communicative situations. (Pp. 39–40)

Phillips suggests some possible developmental explanations for the existence of this reticence. The child may be rewarded by adults for being silent, and thus a

pattern of reticence becomes reinforced. As a result, the child may "seek similar rewards in other social settings" (p. 44). The child could once have faced a traumatic experience that prompts withdrawal whenever he is placed in a demanding situation with which he is unable to cope. Another explanation rests on the values of communication that a child may learn from her environment. In a study of reticent college students, many came from lower socioeconomic groups or from ethnic groups that use talk as a vehicle for abuse or ventilation (Phillips and Butt 1966).

McCroskey (1970) used one of the definitions offered by Phillips to define "communication apprehension" as a "broadly based anxiety related to oral communication rather than a variety of 'types' of communication-bound anxiety" (p. 270). What he is referring to is a general anxiety about the use of speech communication, whether it be in a public speaking situation or an interpersonal encounter.

Lamb (1972), in adopting Speilberger's theory of anxiety, divides "speech anxiety" into speech-A-state, and speech-A-trait (*A* stands for *anxiety*).

> Speech-A-state may be defined as anxiety experienced in a speaking situation which is characterized by subjective, consciously perceived feelings of tension and apprehension, and activation of the automatic nervous sytem. Speech-A-trait, on the other hand, refers to relatively stable individual differences in the disposition or tendency to respond with elevations in A-state in a particular situation. Speech-A-trait may also be regarded as reflecting individual differences in the frequency and intensity with which Speech-A-states have been manifest in the past, and in the probability that such states will be experienced in the future. (P. 63)

One important implication of these distinctions is mentioned by Lamb. He indicates that physiological measures are measures of A-state because they are measuring a specific instance, whereas self-reports can be measures of either A-state or A-trait.

Wheeless (1975) draws a distinction between "communication apprehension" and "speech anxiety." Wheeless conceptualizes communication apprehension as fear. It is implied that apprehension is an anticipated reaction, whereas speech anxiety might be the actual reaction. Another important issue raised by Wheeless, which is often overlooked in the conceptualization of communication apprehension, is what he calls "receiver apprehension." This apprehension is associated with the decoding and response tendencies of the receiver. Thus, communication apprehension may be thought of in terms of both a sending and a receiving function.

Burgoon (1976) introduced a new term to describe the "chronic tendency to avoid and/or devalue oral communication"—"unwillingness to communicate."

She divided this construct according to four types of personalities that she found described in research literature. The first of these exhibits anomia and alienation, "characterized by apathy, anxiety, and other negative affective states, or in the more extreme form known as alienation, by hostility" (p. 60).

The second type is introverted, behaviorally similar to the first type but for different reasons. The introvert often seems quiet and shy but may simply have little use for communication and may place low value on the opinions of others.

The third type is the individual with low self-esteem. This person avoids communication because of the expectation of rejection or criticism. Having less faith in their own opinions, such individuals are more easily persuaded and are more conforming than are other people.

The last type is characterized by communication apprehension and reticence. It is differentiated from the other types by its stronger relation to the specific communication situation. Burgoon's description of this type is much like those of other authors already presented: the individual feels inadequate in communication, feels insecure, is hesitant about expressing ideas, is afraid of challenges or criticisms, and is prone to agree with others.

With this knowledge of how the terms have been conceptualized, you should be better able to understand the differences in the approaches taken to measure this phenomenon. In general, it can be assumed that when we are referring to communication apprehension we are talking about a fear of anticipated outcomes of a communication experience. This fear may be experienced in either receiver or sender roles, and the communication situation can vary from an interpersonal one to a public-speaking one.

Communication apprehension and competence

How does communication apprehension relate to communication competence? Almost all the authors we have cited thus far typify the apprehensive communicator as less likely to exhibit socially appropriate behavior for a given communication situation. In other words, communication apprehension may partially explain why someone would not be considered a competent communicator. This is important because the usual explanations for lack of communication competence (improper training, lack of exposure to enough situations from which to acquire communication knowledge and skills) may be incomplete.

> The normal adult is expected to be able to participate with reasonable skill in a variety of situations ranging from appearance on the public platform through dyadic interactions in interviews to time-structuring socialization. But the reticent person may continue to seek social rewards by using the pattern of silence he found successful in childhood, or he may come to perceive society's demands as unfairly contradictory to the social norms he was first taught. (Phillips 1968; p. 46)

An important issue is raised here that is relevant to our concern with communication competence. Mere *silence* should not be mistaken for apprehension or reticence, for, despite lack of talkativeness, a person may still be able to meet the functional demands of a communication situation. The reticent or apprehensive communicator, on the other hand, "cannot participate even when he needs to or when he feels strongly enough to want to" (Phillips 1968; p. 45).

Communication apprehension indeed may be considered a block to communication competence, because the same elements that contribute to communication apprehension may affect communication competence. It is quite possible that someone could be a competent communicator but not be judged as such because apprehension distorts performance and creates an image of incompetence. It is necessary to separate the effects of apprehension from communication performance in order to assess communication competence.

Issues in communication apprehension

The "dimensionality" of communication apprehension refers to the nesting of other concepts within this global term. Communication apprehension may be a conglomeration of phenomena rather than a single one. The problems involved in this conceptualization lie in identifying potentially independent dimensions and ascertaining their contributions to the overall concept.

Friedrich (1970) reexamined Gilkinson's Personal Report on Confidence as a Speaker (PRCS) as a factor-analytic method to determine whether the items were unidimensional or multidimensional. He found support for three dimensions that he named, on the basis of what the items seem to reflect, speech anxiety, exhibitionism, and reticence. An additional dimension, found for female subjects in the public-speaking situation, was physical manifestations. Speech anxiety included those scales dealing with anxiety in certain speaking situations, typified by fear of forgetting, feeling awkward, feeling tense and stiff, feeling dazed. Exhibitionism dealt with confidence in the speaking situation, typified by finding speaking in public to be pleasantly stimulating and by seeking opportunities to speak in public. Reticence dealt with anxiety in any speaking situation, typified by low self-evaluation and the feeling of not having anything of value to say to an audience. Physical manifestations dealt with physical indices of anxiety, typified by "I gasp for breath as I begin to speak" and "I perspire while speaking."

McCroskey (1970) questioned Friedrich's dimensions. He argued that the factor-analytic approach will almost always indicate multidimensionality. He suggested that Friedrich's analysis simply differentiated the negatively phrased items on the PRCS from the positively phrased items, which were arbitrarily labeled "speech anxiety" and "exhibitionism" respectively. McCroskey went on to advocate development of another scale that would be more situation-free, assuming that the type of apprehension a person experiences in a public-speaking situation is the same type of apprehension experienced in an interpersonal situation.

The dimensionality issue is dependent upon the development of instruments specifically designed to test *theoretical* dimensions. For example, Mulas and Sherman (1974) developed a behavioral assessment that was designed to reflect a multidimensionality of speech anxiety. Their observer reports seem to indicate the existence of four independent factors: rigidity, inhibition, disfluency, and agitation. These may well be reflections of four independent manners in which speech anxiety may manifest itself; whether they reflect four different types of anxiety is still in question. Perhaps more important, multidimensionality seems to be present in the conceptualizations most people have of communication apprehension, or speech anxiety. Drawing from the revisions made by Burgoon, or the sender/receiver dichotomy of Wheeless, or the state/trait dichotomy of Lamb, it would seem reasonable to assume some sort of multidimensionality.

Traditionally, the concerns about apprehension and anxiety in a communicator stem from the public-speaking situation; thus, one of the first terms applied to the phenomenon was "stage fright." McCroskey began to expand self-reports of apprehension to include other situations, but his final instrument still lends itself most accurately to evaluating the public-speaking situation. Burgoon developed a more situationally sensitive scale, including items indicative of communicating with family and friends (versus communicating with strangers) but excluding public speaking items.

Another issue in the conceptualization of communication apprehension is temporality. Are we concerned with the fear or tension exhibited or reported before, during, or after a communication event, and are these different? Though this issue has not been dealt with in any detail, it does seem to underlie any conceptualization of communication apprehension/anxiety. Measures often include questions about how a person felt before speaking, as well as during speaking. The very inclusion of the word "avoidance" in some of the definitions indicates a concern with anticipation. The intensity of anticipation of an event often outweighs the anxiety that occurs during the event. Dickens and Parker (1951), using self-reports, observer reports, and physiological changes, found a strong anticipatory reponse in subjects in a public-speaking situation. Thus, there may be different levels of anxiety that depend upon how much forewarning precedes a specific communication event.

Assessing communication apprehension

The possibility of the existence of different types of communication apprehension must be considered in selecting a measure for this concept. There are three major ways in which communication apprehension is measured: self-reports (introspection), physiological changes, and observer evaluations. Research discloses only moderate interdependence of these, suggesting that each taps a

different phenomenon or, at least, different dimensions of the general phenomenon.

Self-reports are the most widely used, for a variety of reasons, mostly pragmatic. They are the easiest method to employ and probably the easiest to analyze. They have high reliability, and their validity is generally acceptable, though it is based primarily upon construct validity. Wheeless (1975) gives a theoretical basis for the use of the self-report:

> The point here is that if the person understands that he *is* apprehensive and *why* he is apprehensive (fearful), then his own report of his own fear ought to be the most valid. Observer ratings and physiological indices probably do not assess this aspect of communication apprehension as directly. If a person thinks he is afraid, he probably is. The ways a person cognitively processes his own physiological cues probably determines his fear levels rather than the physiological manifestations themselves. (P. 262)

Mulac and Sherman (1974) enumerate some of the negative aspects of using the self-report. They see an "insufficient number of scale divisions, equal weighting of variables which are unequal in importance and/or the unidimensionality of instruments used to measure this multidimensional concept" (p. 134).

Porter (1973) criticizes self-reports on the basis that they, in and of themselves, may be responsible for generating anxiety and, therefore, may interfere with the measurement of speech anxiety. This seems reasonable in light of the considerable evidence that some people react to tests and measurements with great anxiety. The degree of this effect is not known, but it would be logical to assume that test anxiety might be closely related to speech anxiety.

Physiological measures include measures of heart rate, palmar sweat, respiration, and so on. They are accurate in measuring what they purport to measure. It is difficult for a subject to control them and thus to hide what might otherwise be easily concealed by misrepresentation on a questionnaire. Similarly, physiological measures might reveal an anxiety of which the subject was not even aware.

The major shortcomings of physiological measures are their expense, the expertise required, and the amount of time necessary to generate accurate information. Another limitation is the difficulty of using the necessary equipment in informal situations or in situations involving interaction with family members and friends. The problem is compounded if one desires a trait measure for a particular person across communication situations.

The observer systems of rating communication apprehension have the same advantages and problems as do other observer rating systems. If communication

apprehension is indeed affecting the communication behavior of an individual, such effects should be observable. Mulac and Sherman base their measurement on such an assumption. Types of behavior that may be observed include nonfluencies, rate, pitch, facial expressions, body use, and tone. The disadvantages include the amount of time needed to train observers and the difficulty of obtaining satisfactory reliabilities for the observations. An important disadvantage is identified by individuals who claim that many behaviors associated with communication apprehension are impossible to observe and that those that are observable may not be in direct response to the anxiety. Moreover, it is sometimes difficult to "observe" interaction between the subject and family, friends, or strangers.

Blubaugh and May (1975) give an excellent summary of the problems that seem to exist in the theory and measurement of communication apprehension or speech anxiety:

1. Inadequate conceptualization, which tends to be limited to operational definitions.
2. Differing variables, some measured in anticipation of the event, some during, and some consequent to, the event or experience.
3. Lack of precise and quick measure, contemporaneous with the event, which could not seriously disrupt the process of speaking.
4. No clear separation between emotional states already present in the speaker and those induced by the situation or experience.
5. Inadequate awareness of the nature of "response specificity," or habitual response patterns by which people indicate emotional response to many different kinds of stress.
6. Experimental designs which study changes in groups rather than individuals and, further, do not include the critical variable of time.

This last point is important to note because it is a caution we must emphasize in the use of the instruments we have reviewed.

We have included only two types of measures: self-reports and observational systems. The specific questions of reliability, validity, and usage are included in the reviews and won't be attended to here. We will briefly give some of the strengths and weaknesses that will be important in your selection of measures.

We have included three observational systems, the Behavioral Assessment of Speech Anxiety, Anxiety and Speech in the Initial Interview, and the Situation Test. Each of these has some criteria by which an observer is to evaluate the speech of a particular subject. To overcome some of the weaknesses of the observation system, it is important to have adequately trained observers and to establish their inter-rater reliability. Don't plan on using these procedures for evaluating a large number of subjects. It will be time consuming and you will have

problems with the reliability of many raters. Some of the measurements involve recordings of time delays or rates. Though these can be made with a fairly high degree of accuracy, one must cautiously make an inferential leap between what is measured and how it reflects communication apprehension.

The remainder of our reviews are of self-report measures. We have already mentioned the problems of self-reports. We have not included all of the measures that exist. There are a great number from the pre-1960 era that were developed to assess public-speaking situations. The PRCS is one of the oldest and has been one of the most widely used. However, the items included in it are somewhat dated, and it is included because of its historical significance. The McCroskey Personal Report of Communication Apprehension is more up-to-date. Burgoon's Unwillingness-to-Communicate Scale works as a good measure of the type of communication apprehension most likely to be found on an interpersonal level, but it is not directed toward public-speaking situations. Other measures are included that generally follow a particular conceptual slant. This tendency of each measure to be directed toward idiosyncratic ends produces both favorable and unfavorable results. It provides several ways of examining something that is mistakenly treated as measurable by one overall assessment, but it requires the user to determine what type of communication apprehension or anxiety is to be assessed.

One last note concerning these measures: they are in a rather early developmental state. Further improvement and development is needed before one can use any of the measures for the purposes of diagnosis.

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Nonverbal Behavior

An observer of the human scene has enormous potential "subject matter" available. The initial problem one faces is what to observe. One might concentrate on the *content* of an interaction, keeping track of the topics covered. Or one might pay attention to the *process* of an interaction, concentrating on who initiates, who interrupts, and so on. One might pay attention only to the words exhibited or exchanged or to the behavior that accompanies the words, which is thought by many to carry even more meaning than the words themselves. The phrase "It's not what he said, but how he said it" suggests that two messages are communicated simultaneously in any interaction. One is the verbal content, and the other is the nonverbal component of that message, which may illustrate, emphasize, or even contradict the verbal content.

Probably most of the essential meanings exchanged in a face-to-face interaction are conveyed by movement, facial expression, touch, distance, and vocal overtones. It would be difficult to observe and assess another human being without taking into account the important aspect of nonverbal communication.

Moreover, because of a growing awareness of the importance of nonverbal communication, many studies concentrate on that alone, to the exclusion of all the other subject matter that might be observed. Just as the principles of perception are not overturned when the subject matter is the perception of humans, all that has been discussed thus far about the principles of observation is not overturned when the subject matter is nonverbal in nature.

There is a lot of talk now in the popular literature about "body language," and there are a lot of articles in which different authorities attempt to "translate" that body language into meanings. Is this what nonverbal communication is all about, a sort of code for assigning meaning to body movement? The answer to that question is that it includes a good deal more than that, and such "translations" of movement or gesture into some kind of "message" are a good deal harder to come by than those popular books suggest.

There is a difference between "behavior" and "communication." All of us are behaving all the time; in fact, we cannot not behave. Even our moments of inactivity or sleep are behavior. But is it communication? The answer is no. *In order for communication to take place, another person is necessary.* Communication is usually thought of as "to share in common," "to exchange," or "to be connected to others." A person can behave alone but if communication is to take place, as the definitions suggest, another person is required.

But is the mere presence of another person all that is necessary? Again the answer is no. The second person, in order to be a receiver of communication, must take something into account. It might be something that was said or done, the noticing of some internal condition of the sender. It might even be something that was *not* said or done. Virtually anything that could be taken into account by the second person is what makes communication "happen."

What, then, is nonverbal communication? Generally, it is thought to be the

> Characteristics and actions of people that are exchanged or that influence the exchange and that are taken into account by the communicators (other than words or word substitutes).

Naturally, this includes a great deal. Many people would add to this definition the context of the communication, the setting in which it took place. With a definition of potential subject matter that is this broad, how does one go about observing nonverbal behavior and taking some of it into account? Obviously, if everything but the words or word substitutes can be observed, and we cannot attend to all of them, only some will be taken into account, and all of the other behaviors will be let go or ignored. Some of the actions or characteristics will be communicative and others will not, depending on how the observation takes place. Just as there are some fairly standard ways of accomplishing observation, there are also some fairly established ways of observing the nonverbal aspects of behavior. What are they and how are they taken into account?

Most nonverbal observation is visual. But because nonverbal communication can include such things as paralanguage, touch, and smell, it can also be olfactory, tactile, and auditory. Most nonverbal observation is of people, but, again, because nonverbal can include setting, context, and time/space relations, sometimes buildings, furniture, distances, and human artifacts are taken into account and attended to. For decades now, anthropologists and sociologists have been doing this kind of observation of behavior in cultural contexts. But emphasis on nonverbal communication is a relatively recent concern, and not a great deal is known about it. The recent availability of movie-making equipment and videotape recorders, however, has made possible the repeated observation of human behavior, which was not possible before, and has given tremendous assistance to the study of nonverbal communication.

The human animal is a talking animal. There seems to be hardly a thing that humans get done without a lot of chatter and interaction. It is language, after all—talking—that makes humans unique among other animals. Humans use the verbal channel to share knowledge and often to lie or deceive. Language can be used to talk about things that do not and will not exist. But the verbal channel never comes alone.

It is impossible to write without the style of the writing itself suggesting a more or less immediate relationship between the writer and reader. It is impossible to talk without paralinguistic overtones, which can also be communicative. It is impossible to talk without giving more stress to some words and less stress to others and without moving when vocal emphases are given. It is impossible to talk without some kind of facial expression being evident at the same time. Whereas the verbal channel carries cognitive information or redundancy, the nonverbal channel indicates affect, attitudes, and relationships. Utilization of the systematic techniques available for the observation of nonverbal behavior can provide the researcher with important data of the communicative aspects of the human condition, and a better understanding of how communication plays a role in all human behavior.

Obviously, in a field as new as the study of nonverbal communication, there is still considerable disagreement about how research should be conducted. There appear to be three unresolved issues. Just as with other behavioral research, there is disagreement about how much study should be conducted in the field and how much in the laboratory. There is disagreement over whether research should concentrate on the observation of a lone individual or whether it should concentrate on the interaction of two or more individuals. Finally, there is some disagreement over the extent of the use of electronic aids, such as slow-motion cameras, for the recording of (otherwise unobservable) material. Decisions about each of these issues must be made by each researcher. The most common-sense remark, however, that might be made about research methods and the subject-matter area of nonverbal communication, is that, for the most part, *the method that is employed is a function of the content that is to be observed*. Some methods seem to lend themselves to the observation of certain contents. Whereas that may not always be the case, it is usually so. Common sense prevails.

Transcription systems

Naturally enough, one of the problems of researching nonverbal behavior is getting it down on paper—recording the behavior in some way. Earlier we said that the observation of behavior usually involves the *classification* of behavior and the *counting* of certain phenomena. The study of nonverbal behavior is no

different. Much of the early research involved the development of transcription systems that would allow for classification and counting. The pioneer in this area was Birdwhistell (1952), who saw the evolution of such a system as something akin to "breaking the code" to reveal the secrets locked in nonverbal behavior.

Birdwhistell's concentration was on "kinesics," or body movement, but he had considerable training in linguistics. He approached movement in the same way linguists have approached language, breaking large structures, such as sentences, into smaller pieces, such as sounds, and then attempting to account for what can happen in the larger structure. Birdwhistell broke down body movement into smaller segments, even giving the segments labels similar to those used by linguists. Eventually, he accounted for virtually all body movement. Then he was able to align his code of movement with the linguistic description of some utterance to see how the two went together. He had an elaborate symbol system for recording such movements as "squinting," "clenched fists," and "narrow smile."

One can see that such a symbol system allowed the observer of behavior to classify and to count certain behaviors, making possible later analyses. The system is highly specific, allowing a transcriber to account for over thirty micromovements, or "kines," of the eyebrows. Some of those kines may be taken to have meaning and some may not, but they could not even be considered to have meaning if they had not been identified by a classification system. It is important to remember that this system evolved as a way to look at the movements accompanying speech.

There are a number of fairly standardized notation systems for recording the paralinguistic features of nonverbal behavior—those aspects of communication that are vocal but not verbal. Linguistic anthropologists have provided ways of coding pitch, tempo, stress, volume, and vocalizations that accompany language but are not language itself and that contribute to the meaning of a verbal message. Such individuals as Pittinger and Henry Lee Smith have made contributions in this area.

Another transcription system, evolved by Brannigan and Humphries (1971), was intended for the observation of children in a psychiatric clinic. It was also intended to account for different points of the body at the same time. It used a series of seven horizontal lines, each representing a region of the body, so a composite diagram of behavior observed over a period of eight seconds might be recorded. The intention of this system was to allow a psychiatrist to record simultaneous sequences of movement over a brief span of time. Each line looked something like the following example.

	1	2	3	4	5	6	7	8 seconds
LOCOMOTION	walk		still			walk	still	

One can see that each notation would have to be simple if seven regions were to be observed (unless they could be videotaped and played several times). One can also see that the example is not intended to record behavior that parallels language.

Condon and Ogston (1966) of the School of Medicine at the University of Pittsburgh also worked out a system for segmenting behavior. They concentrated on upper-body orientation, looking at seven aspects from head to trunk and, as with the Brannigan and Humphries research, used a series of horizontal parallel lines, one for each upper-body aspect to be observed. A code system allowed them to make entries of no more than three letters on each line to detail movement. However, what is different is that they concentrated on interaction. They filmed the encounters, for example, of a father, a mother, and a son and used the system for recording simultaneously the upper-body actions of all three persons, looking for movements across the same number of frames.

Hall (1963) was the originator of the term "proxemics" for the ways in which people unconsciously structure microspace. Microspace was taken to mean the distances between people in the conduct of their daily interactions. This included the organization of space in houses and buildings and even in the layout of towns and cities. Hall divided proxemic behavior into eight different categories:

1. postural sex identifiers
2. sociofugal-sociopetal axis
3. kinesthetic factors
4. touch code
5. visual code
6. thermal code
7. olfaction code
8. voice-loudness scale

Each of the categories necessitated a code for recording the proxemic aspect of nonverbal behavior; for example, the touch code provided for recording the amount of touching that went on in an interaction and was scored as follows:

0. holding and caressing
1. feeling and caressing
2. prolonged holding
3. holding
4. spot touching
5. accidental touching
6. no contact

The kinesthetic-factors category related to the closeness of one person to another and to the potential each of them had for holding, grasping, and

touching. The pairs of people could be scored according to the following scale and description:

#1 within body-contact distance
#10 just outside this distance
#2 within touching distance with forearm extended
#20 just outside this distance
#3 within touching distance with arm extended
#30 just outside this distance
#4 within touching distance by reaching
#40 just outside this distance

Each person in an interaction had a repertoire of eight possible kinesthetic distances, according to this notation system.

Hall's notation system, for which only two examples have been given, provided a way to make specific recordings of observations of a very limited nature. The system has the advantage of being workable and simple. It has been used effectively by anthropologists Watson and Graves of the University of Colorado and by numerous others and has proven itself an effective system for the notation of proxemic behavior.

Other systems exist for the notation of time, facial expression, eye pupil size, micro-momentary movement, and social interaction. Some are anthropologically oriented; some are clinically oriented. All serve to describe and record human nonverbal behavior.

Strategies and research tools

Other than notation systems, what techniques are there for the observation of human behavior? There are a number available to the observer of nonverbal behavior, just as there are a number available to any behavioral scientist. A few of them might serve illustrative purposes.

Since the early 1950s, Birdwhistell (1952) has accomplished body-motion research by interviewing in the field. In one instance, he trained ten interviewers for an extended study of a Kentucky hill community. They were trained to use a tripartite scheme describing "syntactic" (relationship), "tonal" (long muscle), and "arrested" motion. The interviewers looked for patterning within the culture, and, according to Birdwhistell, acquired a cultural sensitivity to social-interaction cues.

Condon and Ogsdon used analysis of sound films to differentiate between normal and pathological behavior patterns. They took sound film of interaction, at forty-eight frames per second, which is twice the normal rate. Then the film was played at normal speed and was scanned intensively, using a time-and-motion-analyzing projector. This projector was similar to those used by football coaches

to study films of games. Each frame of film was numbered for easy identification, to enable researchers to focus on discrete units (at one forty-eighth of a second). The film was used to study speech and body-motion patterns and to allow comparison of normal and abnormal behavior patterns.

Loeb (1968), of the University of Pittsburgh School of Medicine, used what he termed the "microscopic" analysis of film to examine a recurrent behavior pattern in a psychotherapeutic session. He repeatedly viewed a thirty-three-minute, seventeen-second, black and white, sixteen-millimeter (twenty four frames per second) sound film of a twenty-seven-year-old, white, female patient during a psychotherapy session. The film was taken by Gregory Bateson, and each frame was numbered in sequence so frames could be located in time. The film was viewed repeatedly at normal speed and at slow speed using a Bell and Howell time-and-motion analyzer (Model 173 BD). Analysis revealed that the patient consistently closed either hand in contexts containing expressions associated with anger. She may have grasped the arm of the chair or clenched a piece of tissue, or her hand may have been empty, but in the "anger context," her hand closed. During the film, she made eighteen of these fistlike movements in ten separate anger contexts, which were taken by the psychiatrist to be an *underlining* of a feeling of anger. Using a common-sense approach to standard psychoanalytic procedure, the psychiatrist was able to infer that the "content of anger" was in the patient's unconscious and to make that a part of diagnosis.

These are, of course, only a sampling of the strategies and research tools available to the observer of nonverbal behavior. Others include time-sampling motion pictures of spontaneous movements, a semantic index of vocal pitch, and microanalysis of sound tapes of the human voice, for paralinguistic cues. Still others continue to be originated.

Relationships to other variables

If nonverbal behavior is generally seen in context and studied in association with other aspects of human behavior, a natural question would be the extent of that relationship. These studies tend to fall into two major groups. Some might be called *structural* studies, which attempt to discover the "rules" of a nonverbal system, and some might be called *external variable* studies, which attempt to demonstrate the relatedness of nonverbal behavior to another, associated characteristic. Some examples of both kinds of studies are given below for the purpose of illustration.

Altman and Haythorn (1967), of the Naval Medical Research Institute of Bethesda, Maryland, were interested in how groups of hospital patients use the "territory" of rooms, beds, and chairs. They designated dyads with composition differences based on personality. Nine dyads lived in a small room for ten days with no outside contact. From the observation of this behavior, Altman and Haythorn evolved an "ecology of isolated groups."

Deutsch (1947) was one of the first psychiatrists to begin to take posture into account in the analysis of psychiatric patients. He found regular parallels between motor acts and psychic functioning. Naturally, his observation and examples were clinical, and his analysis was essentially psychoanalytic. However, he made clear connections between posture (kinesics) and some unseen mental condition, dealing often with congruent/incongruent nonverbal cues.

Exline (1963), of the University of Delaware, concentrated on the way in which people interact visually with others. He systematically and accurately recorded the visual behavior of people involved in free discussion and determined that various patterns could be identified. For example, men and women differ markedly in their visual behavior; women look at one another longer than men do. This information is important to the knowledge of social perception, as well as nonverbal communication.

Hess (1965), of the University of Chicago, has done considerable work in the relatedness of attitude and pupil size. What is especially important about the Hess work in pupil size and mental activity is that the dilation and constriction of pupils is not only a nonverbal cue, but it is involuntary. Hess used a "pupilograph," which recorded not only where the eye looked but where the pupil expanded, contracted, and remained the same. From this record of ongoing mental activity, Hess determined that pupil size could be used to indicate interest, emotion, and attitudes about whatever was looked upon.

The late Sidney Jourard (1966), of the University of Florida, explored touching behavior by creating a "body-accessibility" questionnaire with male and female figure charts. The aim was to see the extent to which people permit others to see and touch their bodies, and the extent to which they had seen and touched other, "target persons." Significant relations were found between the measures of seeing and being seen by another person and between touching and being touched by another person. Touching was seen as a function of sex differences, relationship, personality, attractiveness, and religious background.

Aiken (1963), of the University of North Carolina, attempted to determine whether clothing had any relationship to certain measures of personality in women. Because the uses of clothing range from the functional to the ornamental, it was possible that clothing might be related to some traits of personality. Aiken constructed and validated a clothing opinionnaire. He then administered the opinionnaire with several measures of personality. He found a number of significant correlations in five clusters associated with clothing: decoration, comfort, interest, conformity, and economy, in a sense contributing to a "psychology of dress."

Dion, Berscheid, and Walster (1972) attempted to determine whether physically attractive persons were perceived by others to lead "better" lives and to have more socially desirable personality traits than do less-attractive people. They produced results that demonstrated a "what is beautiful is good" stereotype along a physical-attractiveness dimension. The findings have implications for

self-concept development, interpersonal perception, and social interaction, as well as for nonverbal communication.

It can be seen from these examples that nonverbal behavior is of interest not only as a unique area of study but for the relationships it appears to have with everything from affiliation to personality, from affect to attitude, from accessibility to abnormality. Clearly, if nonverbal behavior provides some kind of access to all of this, it may also be a way of assessing competence in general and communication competence in particular. A person cannot merely "be competent"; the individual must demonstrate that competence in some fashion, and the demonstration necessarily involves both verbal and nonverbal forms of communication. Both might be tapped in making assessments of competence. Both might be monitored for whatever evidence they can provide.

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Empathic Ability

Whatever else the term "functional communication" might be said to imply, it must imply at least some concern for the extent to which one person understands another. Understanding is perhaps the most widely used conceptual or theoretical criterion for determining when communication may be considered adequate, functional, or effective. It is by no means the only theoretical criterion, but it must certainly be regarded as one of the more-important ones. However, its use as an empirical criterion in either evaluation or theoretical research does not even begin to keep pace with the importance it is given in conceptual and theoretical works. One of the major reasons for this discrepancy is the difficulty involved in operationalizing the concept "understanding." Consequently, our approach to this measurement problem will be slow, cautious, and purposefully simplified. It cannot be otherwise, if we are to avoid becoming hopelessly lost in the conceptual and methodological issues surrounding this particular measurement problem. First, we will need to make some preliminary distinctions that will help us to focus more clearly on what it is we are attempting to measure.

Listening ability versus empathic ability

The conceptual distinction between listening ability and empathic ability is not a discrete one. If you have read the earlier comments on listening ability, you encountered a treatment of listening ability that will overlap with ways in which empathic ability is traditionally conceptualized. Empathic ability, sometimes called person perception, interpersonal perception, social perception, sensitivity, and other things, is usually conceived of as the ability of one person to understand another or to comprehend another's feelings, attitudes, or sentiments. Broadly defined, empathic ability includes many of those traits or skills identified with listening ability. A potentially useful distinction, however, grows from the ways the two abilities are typically assessed. Measures of listening ability usually focus on the extent to which an individual comprehends, interprets appropriately, and recalls the symbolic content of another individual (what a person says). Measures of listening ability tend to focus upon the processing and retention of verbal content. Almost all listening tests involve the presentation of verbal content to subjects and the assessment of the extent to which the subjects comprehended, correctly interpreted, or correctly recalled that verbal content. On the other hand, most measures of empathic ability focus upon the extent to which one person understands, not the verbal content, but the person producing the content. Empathic ability involves understanding the person. But, although we know that much of this understanding comes from inferences made on the basis of what the person says, tests of empathic ability tend to develop their scoring criteria, not from an analysis of the other person's verbal behavior, but from information the other person reports about self: characteristics, feelings, or attitudes. Most listening tests derive their criteria from the verbal content produced by another. Most tests of empathic ability derive their criteria from identification of the other's characteristics "as a person."

Sympathetic response versus empathic response

As a matter of both theoretical and empirical convenience, a basic distinction is usually made between sympathetic and empathic responses. The traditional, popular meaning given to the phrase "I empathize with you" implies two fundamental processes: (1) I am experiencing the same feelings you are experiencing—I am happy because you are happy; your embarassment is causing me to feel embarrassed also; I hurt in the same way you hurt; I feel joy in the same way you feel joy. (2) I understand how you are feeling—I may not feel the same way, but I recognize your feelings; I understand something about you, the kind of person you are, your attitudes, values, or beliefs.

We presume that the first set of responses occurs when one person effectively experiences what another person experiences; the second set of responses occurs when one person comprehends the other as a person. The first

set of responses is usually called "sympathetic." The second set of responses is usually called "empathic." That the two types of responses are frequently part of the same general process is alluded to in a frequently cited definition of empathy:

> Empathy is a process of comprehending in which a temporary fusion of self-object boundaries, as in the earliest pattern of object relation, permits an immediate emotional apprehension of the affective experience of another, this sensing being used by the cognitive functions to gain understanding of the other. (Guioria 1967; p. 376)

In the measurement of empathic ability, however, the two types of responses are usually separated. The measurement of empathic ability ordinarily involves the assessment of the second type of response. More particularly, the measurement of empathic ability concerns the identification of accurate judgments made by one person about another person's feelings or attitudes.

Stereotyped accuracy versus differential accuracy

This conceptual distinction is important to understanding contemporary measures of empathic ability. Measures of empathic ability usually identify the extent to which one person *accurately* judges or predicts relevant characteristics of another person. The early research on empathic ability differentiated two types of judgment accuracy (Cline and Richards 1960): (1) *Stereotyped* accuracy involves an individual's ability accurately to predict relevant characteristics or responses of a number of other people. It is presumed to be based upon global judgments that grow from sensitivity to social norms. Individuals high in stereotyped accuracy are usually good predictors of the *average* responses of a number of others. (2) *Differential* accuracy is an analytical judgment implying sensitivity to differences between persons and the ability to predict those differences.

The early measures of empathic ability failed to adequately differentiate these two types of accuracy. The failure of the early research to resolve this measurement problem occasionally produced bizarre results. For example, Gage (1952) found that high school and college students were more accurate in predicting the responses of college students to self-description inventories if the judgments were made on the basis of extremely short written stereotypes rather than direct observation of the target persons. This rather strange finding can be explained by the failure of the early research to take into account a projection bias present in the empathy measures.

Projection occurs when one assumes that the target (the person being judged) possesses the same characteristics or properties as oneself. In the early empathy measures, this projection bias was inadequately understood and rarely controlled for within the assessment procedures. The early measures usually had

a judge predict a target's responses to self-description inventories. These predictions were subsequently compared with the target's actual responses to produce an accuracy (or discrepancy) score. Under such conditions, scores are artificially inflated if (1) The judge projects his or her own characteristics onto the target, or (2) both the judge and the target are "average" in terms of their own characteristics. Thus, much of the early support given to the importance of stereotyped accuracy in empathic ability grew out of our own failures either to assess or to control the projection biases in the measures.

When the judge and the target possess similar characteristics, the use of stereotyped judgments based on projection processes is likely to produce erroneous conclusions about empathic ability. That projection biases are likely to be present in empathic judgments is supported by one of Duck's (1973) experiments, conducted in Great Britain. When Duck analyzed erroneous interpersonal perceptions, he found that 93.57 percent of all errors made by one person judging another were a result of the judge assuming a similarity between self and other where no such similarity existed. Thus, the normal presence of projection processes in interpersonal communication will result in high accuracy scores when similarities are high between judge and target and low accuracy scores where similarities are low between judge and target.

This issue, the presence or absence of a projection bias in the measure itself, is perhaps the most-important issue to keep in mind when deciding how to assess empathic ability. At the end of this chapter, we will describe the assessment procedure developed by Hobart and Fahlberg (1965) to remove this projection bias from measures of empathic ability. However, before we review Hobart and Fahlberg's paradigm, let us describe some of the ways in which individuals attempt to assess empathic ability.

Approaches to assessing empathic ability

The measures briefly reviewed in part II of this volume represent three basic approaches to assessing empathic ability. (1) Behavior-oriented descriptions: Some individuals conceive of empathy, not in terms of the accuracy of interpersonal judgment, but in terms of the extent to which exhibited behavior implies empathic understanding. Carkhuff's rating scales include a focus on empathic understanding in interpersonal processes. From direct observation of the behavior exhibited by individuals in interpersonal communication situations, trained raters make judgments of the level of empathic understanding communicated by one person in relation to the other person. Barrett-Lennard's relationship inventory consists of sixty-four statements through which one individual may describe the communicative attitudes and behaviors of another. One of the four subscores for this inventory concerns "empathic understanding." If you are concerned with the extent to which "empathy" may be inferred from the attitudes and behavior exhibited by one person toward another, then you should

examine the brief reviews of these measures. (2) Nonverbal sensitivity measures: Five of the measures in part II (Facial Meaning Sensitivity Test, Communication of Affect Receiving Ability Test, Jones-Mohr Listening Test, Sensitivity to Vocally Expressed Emotions, Scale to Measure Affective Sensitivity) assess one person's ability to accurately identify emotional or affective states in others. Typically, the target person will convey emotional or affective sentiments primarily through facial, bodily, or vocal characteristics. The judge is required to identify the affective or emotional state present in the target. If you are interested in empathic ability conceived of primarily in terms of sensitivity to nonverbal cues, you may wish to examine these measures. (3) Composite measures: Several measures (Interpersonal Perception Method, Measurement of Social Intelligence) generate data that may be interpreted as indicating an individual's empathic ability. The Measurement of Social Intelligence is a multidimensional assessment procedure designed to assess "behavioral cognition." It is quite similar conceptually to what we have been calling empathic ability. The Interpersonal Perception Method is a general assessment procedure that yields four specific measures, one of which is labeled "understanding or misunderstanding" and is arrived at through judge/target comparisons. Both measures grow from conceptual perspectives that allow the inference that what is being assessed is, in part at least, empathic ability.

The assessment procedure we would recommend for measuring empathic ability will not be found among the brief reviews in part II of this volume. It is not really a measure; it is a strategy for eliminating the projection bias from an empathy measure you would develop for your own use.

The Hobart-Fahlberg paradigm

This paradigm was developed as a specific response to the major criticisms leveled against the early measures of empathic ability. Its minimum requirements are: (1) judge(s), (2) target(s), and (3) an inventory that requires dichotomous, or forced-choice, responses to self-description items. Let us delay, for the moment, the question of the source of this inventory. The information that must be generated includes (1) the judge's responses (self-description) to each of the dichotomous items, (2) the target's responses (self-description) to each of the dichotomous items, and (3) the judge's predictions of the target's responses. Such information may be arranged according to the paradigm presented in the figure on page 82.

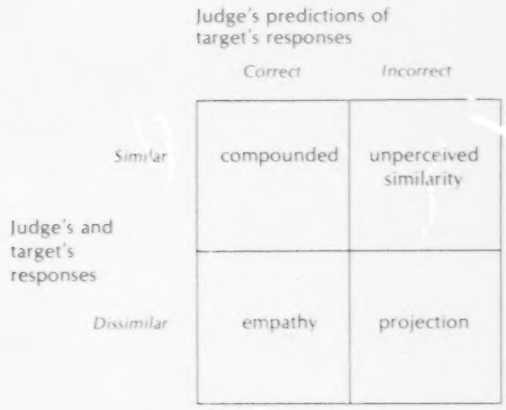
We have described this paradigm elsewhere (Dance and Larson 1976) in the following terms:

> Judge and target, in filling out the self-description inventory for themselves, would presumably have responded to a number of items in the same way and to others in a different way. Additionally, there

would be a number of items on which the judge correctly predicted the target's response and a number of incorrect predictions. Let us first consider the items on which the judge and the target responded similarly for themselves.

Where there are similar own responses and the judge correctly predicts the target's responses, projection may or may not be operating, empathic ability may or may not be operating; it would be very difficult for us to determine which under these circumstances. Thus, in instances where the judge and target respond similarly for themselves and the judge correctly predicts the target's response the measure is *compounded*. In instances in which the judge and target respond similarly for themselves and the judge incorrectly predicts the target's response, *unperceived similarity* is operating.

Now let us consider instances in which the judge and the target respond to items differently for themselves. If the judge's and target's own responses are dissimilar, and the judge incorrectly predicts the target's responses, *projection* is assumed to be operating. The judge's and target's responses were different, but the judge predicted responses for the target that were identical to the judge's own responses. Under these circumstances it is reasonable to assume that the judge is projecting personal attributes onto the target. In instances where the judge's and target's own responses are different, and the judge correctly predicts the target's responses, *empathy* is assumed to be operating. Projection could not be operating, since the judge and the target disagree in terms of their own positions, yet the judge correctly predicted the target's responses. Thus, empathy,



> according to this paradigm, is conceived of as the ability of one person to correctly identify differences between himself and another. (Pp. 125–126)

Because the raw empathy score varies from couple to couple in terms of the number of responses by judge and target that are dissimilar, an adjustment is needed to make the raw empathy scores comparable among different subjects. Hobart and Fahlberg suggest that a couple's raw empathy score should be divided by the couple's dissimilarity score, producing a ratio called the empathy-ratio score. Information concerning the adequacy of the resulting measure may be found in Hobart and Fahlberg (1965).

In order to use this general assessment procedure, you must have a set of dichotomous, or forced-choice, items according to which both judge and target may describe self by selecting one of the two alternatives. You may develop the items yourself or draw them from almost any inventory on which individuals report interest, attitudes, values, beliefs, preferences, and so on. Either the items or the response-alternatives to the items must be translated into dichotomies. Items appropriate for use in organizational settings, with supervisor/subordinate relationships, are available in Smith (1967) and Ross (1973). Items appropriate for use in parent/child relationships are available in Mix (1972).

The measurement of empathic ability is characterized by a range of potentially confusing conceptual and methodological issues. Even the assessment procedure we are recommending here, that developed by Hobart and Fahlberg, has other methodological problems, acknowledged by the proponents of the paradigm. But, for the most part, it represents a reasonable and adequate strategy for assessing empathic ability. If empathic ability is conceived of in terms of the accuracy of interpersonal perceptions or judgments, then this paradigm deserves serious consideration.

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ASSESSMENT PROCEDURES

II

An Introduction to Measurement 4

Part II of this book brings together, and briefly reviews, a number of instruments, tests, and techniques bearing on functional communication. It is intended that a compendium of such instruments make possible improved assessment of those variables that constitute functional communication. All of the instruments are aimed at allowing us to make judgments about the communication characteristics of the people being assessed. But none of the judgments about those people are going to be any good unless the instruments produce worthwhile data on which to base those judgments. There are two fundamental qualities inherent in each instrument: test and technique. No test is perfect. Each one is flawed in some way. And the best available test is worthless unless it is appropriate to the purpose of the user. So a user of any of the contents of this book must be aware of the appropriateness of a test, as well as of the inherent qualities of the test. An ill-used or undependable instrument is not likely to produce results of any merit, no matter how impressive the numbers look and no matter how many people are tested. Error compounded is still error. If a measuring instrument is undependable or inappropriate, any judgments based on it are necessarily of doubtful value.

For example, no one would put much faith in the readings of a thermometer that varied as much as eight degrees when measuring persons believed to have normal temperatures. It is highly unlikely that anyone would build a house using a tape measure that stretched. Yet how often are judgments made about the adequacy of people on the basis of tests that produced inaccurate results each time they were used? Because of the uncertain nature of human assessment, the variability of individual differences, and the relative crudeness of the available

methods, it is unrealistic to expect test scores that have the same reliability as measurements made with a thermometer or tape measure. But it is certainly the goal of test users to get results with what they believe to be a satisfactory degree of accuracy and dependability and to use those tests in appropriate circumstances.

This conclusion emphasizes the importance of two concepts: validity and reliability. Both are fundamental characteristics of tests. This section is intended to discuss and explicate these concepts. Just what do those words mean when they are used to refer to tests?

The attibutes of validity in tests

Validity usually refers to the ability of a test to do what we want it to do, to test what we want it to test and not something else. Nothing is gained if the test is not valid for the purpose for which we intend it. A test that has high validity for one purpose may have moderate validity for another use and negligible validity for still another. Unfortunately, there are no fixed rules for determining what constitutes high, moderate, or low validity. Validity is a matter of degree rather than an all-or-none property. Through training and experience, a test user may gain sufficient knowledge to make informed decisions about validity. Following are some of the ways of looking at validity that a test user would want to consider in judging the adequacy of a test for the purposes of human assessment.

There are a number of kinds of validity that may or may not be present in a test. the first is usually called *face* validity. It means simply that "on the face of it" the test "looks" as if it is valid. It has all of the appearances of being reasonable and worthwhile; it seems that a person taking the test will not be wasting his or her time and that acceptable results are likely to be produced.

If a test "looks all right," a person who is attempting it is more likely to take it seriously. Face validity is essential to test motivation: when a test *looks* reasonable, those who take it are likely to try harder than they would if the test appears to be of doubtful value.

A similar form of validity, but a much more sophisticated one, is *content* validity. This is sometimes known as intrinsic validity, circular validity, logical validity, course validity, curricular validity, or "textbook" validity. Like face validity, content validity is nonstatistical. Content validity refers to whether or not the content in question is likely to be revealed by the items that represent it in the test. Does a given item, for instance, cover a bit of information that represents part of the content that the test is supposed to assess? If the items are drawn from the substance or content of that area, we would probably say that the test covers the important parts of the content that it is supposed to cover and that it has content validity.

Sometimes the validity of the content of a test is arrived at by panels of experts or authorities in that particular content area. If they agree that the test

measures what it is purported to measure, their agreement is called *consensual validity*. The degree of consensual validity will vary with the content, which in turn tends to determine the willingness of experts to arrive at consensus.

Factorial validity indicates that a test is a relatively pure measure of the characteristic or variable in question. It means that the evidence of purity comes from a "factor analysis." Factor analysis is a statistical method for identifying the basic interrelationhips among a set of items or tests. The statistical method identifies the basic dimensions and separates all others. The dimensions, or factors, are identified and isolated by a statistical method. The factor is, in essence, a statistical definition of what the test is measuring.

Statistics, of course, do not "explain" the test dimensions, so it is up to the factor analyst to do so. This kind of validity is related to content validity. One knows that the results of the analysis constitute a particular content and not some other kind of content. Naming the content isolated by the factor analysis is an exercise in logical inference. The factors, however pure, are sometimes illusive and difficult to categorize accurately. The interpretation of the factors is frequently regarded as being related to the construct validity of a test.

Construct validity, sometimes known as "trait" validity, involves both the test itself and the theory underlying the test. For example, a test of attitudes toward authority figures must be a test about figures of authority, but it must also be a test of the theory or the construct underlying the test, which is attitude. Not all tests asking about authority figures are "attitude tests," just as tests that identify the maximum a person can do in response to mathematical questions are not all "achievement tests," and tests that ask how a person thinks are not all "intelligence tests."

Usually, construct validity involves a relationship between the scores resulting from the test and some other, underlying variable that should relate psychologically to the test. If a test has construct validity, the tester should be able to anticipate the basis for the results that are likely to be obtained. Comparing the anticipated results with the actual results checks the validity of both the test itself and the theory underlying the test.

All in all, construct validity concerns the general psychological meaningfulness of the construct that underlies the specific intent of the test. As in our earlier example, in order to be a test of attitudes about authority figures, a test must first meet all of the requirements expected of a test of attitudes about anything. It must not violate those criteria, or it will not represent the construct basic to the investigation, and it will not have construct validity.

When the term *empirical* validity is used, it means the test does well in measuring what is desired in practical situations. If a test is any good, the "goodness" of the test can be demonstrated by relating it to some criterion or standard. If there is a clear relationship between the test score and the criterion, then the test has high empirical validity. If a score of eighty-three means rapid

performance in decision making and a score of forty-two means slow performance in decision making, the test is useful in practical situations in which we wish to know about decision-making speed.

Evidence of empirical validity is frequently obtained through a validity "coefficient," often a correlation between the test and the criterion. The coefficient is the statistical evidence that two properties vary together systematically and thus are empirically joined. If a test has empirical validity, it can be used for predictions and is highly practical for measuring what it is supposed to measure. If a test has empirical validity, whatever its other faults, it is usually a valuable test.

Empirical validity is thought of as being *concurrent* or *predictive*. Tests have concurrent validity to the extent that they can discriminate between two or more groups of people who, on the basis of available evidence, are known to be different. Since the groups *are* different and the test scores *show* them to be different, the scores can be used to make inferences about a trait present in the group. It is likely, too, that the test can be used to distinguish that trait in other groups. Still another form of concurrent validity is the ability of test A to match closely the result of another test, B, already known to be valid. If test B is known to be valid, and test A accurately matches the results and could also be used to discriminate between different groups of test users, we could infer that test A is valid also. One "good" test is used to validate another test of unknown quality.

As the word suggests, predictive validity is the ability of a test accurately to predict the future performance or behavior of persons according to some criteria. This is very much like concurrent validity except for the time dimension. A test may, in fact, have both concurrent and predictive validity. It may distinguish a trait between two groups known to differ, and it may also have the capacity for allowing the prediction of that trait in some proportion in the future. Predictive validity is highly practical. If an investigator can predict certain results (on the basis of, for example, observation of a group) and can identify those predicted results with a test, the investigator will know if the test works, or effectively discriminates. If it does, it allows the investigator to make accurate predictions of behavior in "real-life" situations. What is likely to determine empirical validity, and what is likely to interfere with it? Usually, the higher the correspondence between the test and the criterion, the better the empirical validity. However, some other factors intrude and need to be taken into consideration in estimating the validity.

Some tests lend themselves more easily to validation than do others. For some, the criteria of evaluation are easy to find, and for others they are extremely difficult to find or to separate from other criteria. For example, in a well-researched subject-matter area, the criteria might be well established and almost universally agreed upon by researchers in the area. In a new area of investigation, it might be difficult to get any two researchers to accept even a common definition for what it is they are trying to find out. For that reason, where good

criteria are hard to find, we cannot expect to find high validity coefficients. Moreover, because any two groups are bound to differ in some ways, a test that works well with one group, that discriminates what it is supposed to, may be nearly worthless when used with another group. As groups change, standards for what is an acceptable validity coefficient may have to change also.

What have we said about the quality of tests? What test should you use? How can you know if one test is better than another? When can you have confidence that the test you are using is a good one? Earlier, we said that the purpose of a test is to allow a person to make a judgment about another person. If the test is worthwhile, it is more likely that the judgment will be also. In order for a test to be worthwhile, it must be appropriate for the use intended, and it must also be valid. Validity is the single most important attribute of a test. But there are several kinds of validity. The validation process is one of determining the relationship between two variables, the test and the criterion. The extent of this relationship is the correspondence between the two variables, the degree of relatedness between them, and this correspondence represents the extent to which the test is valid or accurate.

Although it is highly desirable that tests have face validity, content validity, and construct validity and that experts validate this by consensus or by statistical analysis, it is even more important that a test have empirical validity of a concurrent or predictive nature and that this be represented by as high a correspondence as is obtainable.

The attributes of reliability in tests

Logically, no test is valid unless it is also reliable. If a test produces a different score each time it is used, we cannot be sure which of the different scores is worthwhile or whether any of them is worthwhile. So, in order to be valid, it must be reliable.

Rarely do tests ever approach perfect reliability, but we must know the limits of the test and the confidence we can have in the score. We must know how precisely or how loosely we can interpret a score that is intended to help us judge the person or the group. In its simplest terms, the reliability of a test refers to the consistency with which it measures what it is supposed to measure. You may have noticed, if you have weighed yourself on a bathroom scale, that if you step off the scale and then back onto it, your weight may seem to vary as much as two or three pounds. Since you know you haven't gained or lost that much weight in stepping off and onto the scale, you know that the scale lacks some consistency for pounds and would probably be worse with ounces. We would say that the reliability of the scale is faulty, and we would know that, each time we used the scale, although our reported weight may be close to our actual weight, it is likely to vary somewhat with each "testing."

It is important to note that some tests produce consistent scores, but they aren't any good for the uses to which we want to put them. A test may consistently measure something other than the characteristic in which we are interested. Since, strictly speaking, one validates, not the measuring instrument, but the use to which it will be put, it is not unreasonable that a reliable instrument will be invalid if improperly used. Reliability is necessary for validity, but it does not guarantee it. Just as there are different kinds of validity, there are different kinds of reliability.

The first is usually thought of as *external* reliability. If a test is given, and it is scored by five different scorers, and each scorer produces a different result, we would say that the score was more a function of who scored it than a function of the test itself. If a test is objectively scored, then the scorer will not influence the results one way or another. Similarly, if two or more observers are counting the number of stutters or are rating, on a scale, the *severity* of stuttering, we must demand that these observers exhibit considerable agreement. Interobserver, interjudge, intercoder reliability gets at the extent of agreement between the different people classifying or rating the same phenomena. We simply want to feel secure that the results of a measurement reflect the measure and not the user.

Another form of external reliability, and probably the most important dimension of reliability, is *temporal* reliability, or stability over time. If a test produces one score the first time it is given, and, given again three days later, it produces very different results, we would have to doubt the reliability of the test because it was not consistent over time. If a test does not consistently measure a trait or characteristic or behavior, what good can it be? We have to have some assurance that whatever is measured is not a one-time event, that the score results from the test, not from the time the test was taken.

Internal reliability is related somewhat to content validity. It means that any two items of a test are testing the same thing. So the first half of a test, as well as the last half, or the even-numbered items, as well as the odd-numbered items, produce interchangeable results, because the entire test consistently gets at the same content. Beyond the validity of appropriately representing the content, content reliability refers to an internal consistency of content.

How is reliability achieved, and how can we know if a test is consistent enough that we are able to rely on it? When can we have confidence that the reliability is enough? The answer is that, just as there is a correlation, or correspondence, for validity, there usually is one for reliability, as well. But there is a difference. The coefficient for validity is usually the comparison of the test with some external variable. Reliability is not concerned with what a test examines, so there is no outside variable or criterion. Reliability is concerned only with the consistency of the measure, so its coefficient is internal. In order to arrive at reliability, two inside variables must be compared. That may sound easier, but it is not. It may be useful to remember that the word variable means "not constant," and this variability can complicate the quest for reliability.

Reliability is said to be either *absolute* or *relative*. Absolute reliability is the variability of a score if the subject were tested a number of times with the same test or with different versions of the same test. We would compare each of the scores and derive what is called a "standard error of measurement," which represents the reliability of the test in an absolute sense, in terms of score units. The statistic "SEmeas" indicates how much we could expect the individual's score to vary from one testing to the next. This is not reliability in a general or relative sense, and a SEmeas is not a reliability coefficient.

Relative consistency is much more common and is usually what is referred to when reliability is discussed. This indicates the capacity of a test to produce scores that place the test-takers in a position in relation to one another, which results in an index of overall dependability of scores. Relative reliability provides the tester with a correlation coefficient, a coefficient of reliability.

Reliability coefficients are intended to provide numerical estimates of tests' consistency, but how are they used? One use allows estimation of the precision of the test as a measuring instrument. Another use is for estimating the consistency of a test-taker's performances on a test. The second purpose embraces the first. We can know about the unreliable performance of a person on a reliable test, but we cannot know about the reliable behavior of a person on an unreliable test. The second purpose to which a reliable test may be put is to show whether a person's behavior is characteristic.

Aside from the use of observers to classify or categorize phenomena, there are three different estimates of reliability, and these are arrived at through three different means, though each produces a correlation coefficient. The three estimates are *stability*, *equivalence*, and *homogeneity*. The first is arrived at by testing the same people on two different occasions and by noting the degree to which the two sets of scores are related. The reliability is the correlation between the two sets of scores and shows stability of the test over time. The second is arrived at by a comparison of alternate forms of the same test. The two tests will have different questions or items about the same trait, so they are equivalent. A correlation of the scores from the alternate forms is an estimate of their reliability. The third estimate of reliability involves the use of two scores for the same person, derived from a single scoring of random halves of the same test. Splitting a test in half and comparing the scores of the halves is something akin to the "equivalent forms" mentioned earlier. The resulting correlation is a measure of the internal consistency of the test and is generally considered to be a very conservative estimate of reliability.

In theory, a perfectly reliable test with no errors in measurement is one with a reliability coefficient of +1.00; a totally unreliable test has a 0.00 reliability coefficient. A totally unreliable test is one in which all the scores are determined by chance and are not indicators of the trait being assessed. In practice, of course, there are no perfectly reliable tests, nor are there perfectly unreliable ones. It is best to conceptualize a trait as being on a continuum and the reliability estimate

as falling somewhere on that continuum, from high to low. So the reliability coefficient is relative rather than true.

Naturally, we would like to have as much consistency as possible in our measuring instruments, so, generally speaking, the higher the reliability coefficient, the better. As discussed earlier, there are methods and standard statistical procedures that provide estimates of the consistency of a test.

But there are practical considerations as well, which may need to be taken into account. The length of a test increases its reliability, so a shorter test is probably less reliable. In a long golf tournament, a "reliable golfer" is likely to win, but if it is too long, fatigue will take its toll of good and bad golfers alike, just as an excessively long test will.

A heterogenous group will increase reliability, so, in judging a test, we should be interested in whether there is much variability in the test group the score is taken from.

In a test/retest correlation, a shorter length of time between testings will increase the reliability estimate. A test taker may remember parts of the test from the previous session.

Finally, consistent testing conditions (room, heat, time of day, test administrator, and so on) will increase reliability estimates, just as irregular conditions will lower them. The coefficient is a product of test length, group, time, and conditions, so a high reliability estimate is no guarantee of a superior test and a low one is not a sure sign of a bad test. We should be able to vary our demands with our testing needs and with the gravity of the decision to be made about the adequacy of another human being.

In the brief reviews of measures presented in this part of the present volume, we have attempted, whenever we felt sufficiently informed, to make judgments concerning the adequacy of a measure. These judgments center on the validity (usually either content, construct, concurrent, or predictive) and the reliability (either external or internal) of a given measure. We hope this very brief introduction to measurement will provide you with a basis for interpreting the information reported in the brief reviews and for understanding the judgments we express concerning the measures presented.

Using the Brief Reviews of Measures 5

Measures Grouped by Function and Age

The alphabetical list of measures contains the names or titles of ninety instruments, observation systems, or category systems, for general assessment procedures designed to yield information on some aspect of an individual's functional communication. Since functional communication is such a varied phenomenon, and since it contains so many unique and separable dimensions, you are unlikely to encounter any other theoretical construct (with the possible exception of personality) as difficult to measure. The complexity of functional communication forces us to impose on this construct an organizing scheme. This organizing scheme is represented by the grid that follows these introductory comments. It represents no theoretical point of view. It is simply an attempt to group the measures, by function and age, so the reader might better locate measures of particular interest.

Functions. In our search for measures of functional communication, we encountered an amazing array of instruments, category systems, and assessment procedures. We have grouped these measures into seven categories or areas of communication functions. These divisions are by no means absolute or mutually exclusive. Using the grid, it would be wise, once you have exhausted the measures listed for the category in which you are most interested, to examine also the category you think would be most closely associated. We have tried, but may not always have succeeded, to arrange the measures in such a way that their various measurement purposes may be differentiated. The following classification of functions seems to us descriptive of the measures we encountered. (1) *Developmental: Language and Communication Skills.* This category includes measures of both expressive and receptive language and heavily emphasizes the

extent to which an individual develops "normal" language and communication skills. (2) *Communicative Competence and Appropriateness*. Measures in this category focus much more heavily than those in the first category on the appropriateness of an individual's communicative behavior. Thus, the measures in this category are more situational in nature, typically score responses in terms of their inferred consequences or their appropriateness to the situation, and include measures of such things as aggressive and disruptive communicative behavior. (3) *Receiving: Listening*. This category emphasizes the more-traditional measures of the extent to which an individual understands, correctly interprets, adequately processes, or retains, information presented orally. (4) *Receiving: Nonverbal-Sensitivity/Empathic-Skills*. This category includes a variety of measures also designed to assess receiving skills and to generate information concerning an individual's nonverbal sensitivity or empathic ability. These two types of receiving skills are sufficiently related, both conceptually and operationally, to have been placed in the same category. (5) *Apprehension/Anxiety*. This category includes measures of the extent to which an individual feels or exhibits apprehension or anxiety in anticipating or experiencing communication situations. It does not include the more-general psychological measures of anxiety. (6) *Interaction Descriptions*. Measures in this category are primarily observation systems or category systems. Those that are not nevertheless tend to remain at the descriptive level of analysis. Some of the measures, though descriptive, allow for inferences or judgments concerning either the appropriateness or the consequences of communicative behavior. (7) *Correlates: Disclosure/Accessibility; Styles and Preferences; Attitudinal Correlates*. Measures in this category are primarily descriptive, but, in many cases, they are slanted either explicitly or implicitly toward differences concerning the appropriateness or the consequences of communicative behavior. In some cases, the measures have been used as evaluation criteria for communication training or education. In other cases, measures have been used as predictors of other criteria, such as relational satisfaction.

We have attempted to keep the overlap between categories at a minimum, given the variety inherent within the measures themselves. These categories are best regarded as guidelines rather than as discrete classifications.

Age. The measures are also grouped according to three very general ages, for which the measures are appropriate. The measures are grouped according to whether they are appropriate for early ages (infancy through elementary grades), middle ages (junior and senior high school), or later ages (college and adults). In cases where a measure has been developed for use across age groups, or where various forms of the measure are available for different age groups, the measure has been listed under each general age group for which it is appropriate. A quick inspection of the grid will identify discrepancies between the age groupings, in terms of the measures we encountered within each functional area. For example, developmental measures of language and communication skills are used primarily with early ages, as expected. The measures that focus primarily on

adequacy or appropriateness of communication behavior are designed more frequently for use with individuals of college and adult age. In some of the functional areas, we encountered very few measures appropriate for use with children. Similarly, a glance at the interaction descriptions category would lead one to believe that most observation and category systems have been developed for use with children at early and middle ages. On the contrary, we deliberately included a number of observation guides for classroom situations, out of a desire to make this volume more useful to classroom teachers. This strategy is responsible for the unusual distribution of measures in the interaction descriptions category.

How to use the grid. In the brief reviews of measures contained in the next section, the measures are arranged alphabetically and are numbered consecutively. So, if you would like to know, for example, which measures will provide information on the listening abilities of junior and senior high school students, look at the grid where the function "Receiving: Listening" intersects with the age category "middle," and you will find four numbers (9, 15, 31, and 80). In the section following this one, "Brief Reviews of Measures," measure 9 is the BLB Geometric Figures Test, measure 15 is the Brown-Carlsen Listening Comprehension Test, measure 31 is the Ilyin Oral Interview (1976 edition), and measure 80 is the STEP Listening Test. Each of the numbers in the grid refers to the corresponding number of the brief review for that measure, contained in the next section of this volume.

Measures grouped by function and age

	EARLY *infancy–elementary*	MIDDLE *junior–senior high*	LATER *college–adult*
Developmental: language and communication skills	7, 11, 19, 24, 29, 30, 32, 42, 44, 49, 57, 87, 88, 90	41, 57, 87, 90	20
Communication competence and appropriateness	2, 40, 51, 52, 55, 71, 72	2, 34, 55, 61, 71, 72	13, 16, 23, 33, 34, 35, 56, 61, 64, 65, 73, 76, 77
Receiving: listening	25, 80, 83, 84	9, 15, 31, 80	9, 15, 31, 80
Receiving: nonverbal sensitivity/ empathic skills		27, 43, 47	22, 27, 36, 38, 43, 68, 70
Apprehension/anxiety	18	62	3, 4, 12, 62, 63, 66, 73, 79, 86
Interaction descriptions	1, 5, 17, 28, 53, 59, 78, 81, 82, 89	1, 5, 17, 28, 50, 59, 78, 81, 82, 89	10, 21, 50, 67
Correlates: disclosure/accessibl ty styles and preferences attitudinal correlates	48, 85	14, 45, 48, 74, 85	[illegible] 54, 58, 60, 6[illegible] 4, 75, 85

Alphabetical List of Measures

1. Adams-Biddle Category System
2. Aggression Inventory
3. Anticipated Communication Anxiety—Form D
4. Anxiety and Speech in the Initial Interview
5. Aschner-Gallagher Category System
6. Ascription of Responsibility Scale
7. Assessment of Children's Language Comprehension
8. Awareness of Consequences Test
9. BLB Geometric Figures Test
10. Barrett-Lennard Relationships Inventory
11. Basic Concept Inventory
12. Behavioral Assessment of Speech Anxiety
13. Biographical Survey III Scale
14. Brief Measures of Explorations of Preferences and Behavior
15. Brown-Carlsen Listening Comprehension Test
16. Carkhuff's Rating Scales
17. Cerli Verbal Behavior Classification System
18. Children's Audience Sensitivity Inventory
19. Children's Language Assessment Situational Tasks
20. Clozentropy—English Language Proficiency
21. Coding Communication at the Relationship Level
22. Communication of Affect Receiving Ability Test
23. Communication Rating Scale
24. Communicative Evaluation Chart from Infancy to Five Years
25. Cooperative Primary Tests
26. Dogmatism Scale—Form E
27. Facial Meaning Sensitivity Test
28. Flanders System of Interaction Analysis
29. Houston Test for Language Development
30. Illinois Test of Psycholinguistic Abilities
31. Ilyin Oral Interview (1976 edition)
32. Infant Adaptation Scales
33. Interpersonal Check List
34. Interpersonal Communication Inventory
35. Interpersonal Competence Scoring System
36. Interpersonal Perception Method
37. Intimacy Scaled Stimuli
38. Jones-Mohr Listening Test
39. Jourard Self Disclosure Questionnaire
40. Kohn Social Competence Scale
41. Language Ability Test of the Language Arts Test

42. Language Communication Skills Task
43. Leathers' Nonverbal Feedback Rating Instrument
44. Linguistic Ambiguity
45. Machiavellianism Scale (Mach IV)
46. Measurement of Semantic Habits
47. Measurement of Social Intelligence
48. Message Preferences
49. Metropolitan Readiness Test
50. Modes of Communication
51. Modes of Speech Continuum
52. Nonverbal Measure of Children's Frustration Response
53. Observation of Socialization Behavior
54. Orientation Inventory
55. Pagel's Interpersonal Tactics Stories
56. Palo Alto Group Therapy Scale
57. Peabody Picture Vocabulary Test
58. Perceived Confirmation Inventory
59. Performance Record for the Personal and Social Development Program
60. Performance Style Test
61. Personal Orientation Inventory
62. Personal Report of Communication Apprehension
63. Personal Report on Confidence as a Speaker
64. Porch Index of Communicative Abilities
65. Purdue Basic Oral Communication Evaluation Form
66. Receiver Apprehension Test
67. Resource Process Coding System
68. Scale to Measure Affective Sensitivity
69. Self Disclosure Questionnaire
70. Sensitivity to Vocally Expressed Emotions (our title)
71. Sentence Completion Form
72. Situation Exercises
73. Situation Test
74. Situational Preference Inventory
75. Social Accessibility
76. Social Adjustment Behavior Rating Scale
77. Social Insight Test
78. Southwestern Cooperative Educational Laboratory Interaction Observation Schedule
79. Speech Anxiety Inventory
80. STEP Listening Test
81. System for the Analysis of Classroom Communication
82. Teacher-Child Dyadic Interaction
83. Test of Listening Accuracy in Children

84. Tests for Auditory Comprehension of Language
85. Torrance Tests of Creative Thinking (verbal scores)
86. Unwillingness to Communicate Scale
87. Utah Test of Language Development, revised edition
88. Vance Language Skill Test
89. Verbal Interaction Category System
90. Verbal Language Development Scale

1. Adams-Biddle Category System

This category system is used to observe, usually for research purposes, communication occurring in classroom settings. Because it is a relatively complex category system, the coding is done by two observers, and it requires that major blocks of information be scored from video or audio tapes. The category system itself focuses upon six classes of phenomenon: (1) *Role*. This class includes persons to whom the communication is directed, who are attending to the communication, and who are manifesting nonattending behavior. (2) *Role allocation*. This dimension consists of eight categories that identify and discriminate among constellations of individuals in the classroom setting. (3) *Role locations*. This dimension identifies physical locations in the classroom by dividing the classroom into twenty-five equal cells. Areas of the classroom are organized along vertical and horizontal dimensions. The categories within each of these dimensions identify areas of the classroom in which action occurs. (4) *Communication structure*. This dimension identifies patterns of communicating groups within the classroom. It is organized according to three major categories: central group, peripheral groups, and disengaged actors. These major categories are combined to yield fifteen categories describing the structure of communication within the classroom. (5) *Role structure*. This dimension focuses on the pattern of communication roles. Patterns of communication roles are classified according to five categories. The five categories identify combinations of auditor, emitter, and target roles. (6) *Function*. This dimension identifies specific kinds of classroom activities. The categories of function include relevant subject matter,

nonscheduled subject matter, socialization, organization, operations, information dissemination, and intellectualization. The category system generates a considerable variety of information. It would require considerable training in the use of the category system. It is best used with multiple observers assisted by video or audio tape recordings.

Availability of measure: Adams, Raymond S. and Biddle, Bruce P. *Realities of Teaching: Explorations with Videotape*. New York: Holt, Rinehart and Winston, 1970.

2. Aggression Inventory

This inventory consists of seventeen situations commonly occurring at school and at home. Each situation is described so that either the respondent is the target of aggression from others or the respondent reacts to a hypothetical situation in which aggression is a plausible response to the situation. Each situation is followed by four alternative responses or reactions to the situation. These alternatives are scaled from one to four, low scores indicating nonaggressive response and high scores indicating aggressive response. The subject selects one alternative for each situation described. A total score is produced by summing across the seventeen responses. One of the situations contained in the inventory, with the responses rearranged from low to high levels of aggression, follows:

3. The teacher is out of the room. You are all working on a test assignment. The person in front of you turns around and scribbles on your test paper. Would you:

d. Erase the marks and finish your test?
c. Wait and tell the teacher he comes back?
a. Scribble back on his paper?
b. Hit him?

The situations are not as completely described as they are in the Pagel Interpersonal Tactics Stories. However, there are more situations presented in this inventory, and the responses are scaled, whereas, in the Pagel instrument, responses are coded only as either violent or nonviolent. If used for research purposes, the researcher would have to develop information concerning the adequacy (reliability and validity) of the inventory, since none is reported.

Additional information: Doyal, G. T.; Ferguson, J.; and Rockwood, I. "A Group Method for Modifying Inappropriate Aggressive Behavior in the Elementary School." *American Journal of Ortho-Psychiatry* (1971): 311–312.

3. Anticipated Communication Anxiety—Form D

This instrument assesses the tendency of individuals to expect themselves to be anxious or frightened in situations in which they will be required or expected to express themselves orally. It is a self-report, paper-and-pencil inventory, requiring subjects to estimate the amount of fear they expect to experience when

required to communicate in various situations. The inventory consists of fifty items, each item scaled across seven intervals. A factor analysis of the inventory isolated the following major dimensions: (1) size of audience, (2) detached setting versus interpersonal setting, (3) status difference between source and listeners, (4) degree of self-defense implied by the situation (fault versus no-fault). The instrument was developed and refined by sampling college student responses. Its reliability is more than adequate. Its validity was established through a number of procedures, including demonstrating a correspondence between anticipated communication anxiety (ACA) scores and observer ratings of stage fright in classroom public-speaking situations and in panel-discussion situations for women but not for men. Concurrent validity was established by correlating ACA scores with psychological inventory scores (Cattell and Eber 16 P.F.). For both men and women, high ACA scores were associated with timidity, shyness, submissiveness, and dependence. For men only, high ACA scores were associated with simple nervous tension. For women only, high ACA scores were associated with intelligence, guilt-proneness, institutional instability, and conservatism of temperament.

Availability of measure: Page, William T. "The Development of a Test to Measure Anticipated Communication Anxiety." Doctoral dissertation, University of Illinois, Urbana-Champaign, 1970.

4. Anxiety and Speech in the Initial Interview

This assessment procedure employs an interview setting to generate four temporal measures of speech anxiety: silence quotient, reaction time, speech rate, and articulation rate. An interview is taped and played back for analysis. Required time readings are made with a stop watch. Reaction time is a mean of the duration (in seconds) of intervals between the interviewer's remarks and the interviewee's responses, with two seconds as minimum criterion for a silent pause. Speech rate is the number of words uttered per second of total speaking time, including pauses. Articulation rate is the number of words uttered per second of speaking time, defined as total response time minus pauses. The silence quotient is obtained by summing the duration of all pauses and then dividing by the total response time. This assessment procedure is used to investigate anxiety as an activator of speech (increasing productivity) and as a disruptor of speech (increasing the frequency of speech disturbances). Interscorer reliability for reaction time, total time of response and silent pauses, the basic data from which all temporal indices are derived, is reported as 0.97, 0.99, and 0.96, respectively. Some reasonable doubts concerning the construct validity of the measure may be present, since inconsistent results are obtained across experiments, and inconsistent relationships among the temporal indices are present.

Additional information: Pope, B.; Siegman, A. W.; Blass, T. "Anxiety and Speech in the Initial Interview." *Journal of Consulting and Clinical Psychology* (1970): 233–238.

5. Aschner-Gallagher Category System

Used primarily as a training aid, this category system focuses upon the kinds of questions teachers ask in classroom settings. Results are used to provide feedback to teachers, with the apparent purpose of broadening the types of questions typically used by teachers. This category system provides the most-accurate information when used with multiple observers assisted by tape recordings. The system is organized around five broad categories: each of these categories is further subdivided into categories of greater specificity. (1) *Routine.* This category identifies behavior directed toward routine procedural matters. The categories herein are blocked according to those dealing with the management of the classroom, the structuring of class discussion, and judgments directed toward students' performance. (2) *Cognitive-Memory.* This category isolates events characterized by the simple reproduction of facts, usually through recognition, rote memory, and selective recall. The categories herein are blocked according to three major dimensions: recapitulation, clarification, and factual. (3) *Convergent Thinking.* This category identifies thought operations involving the analysis and integration of remembered or presented data. The categories herein are blocked according to four major dimensions: translation, association, explanation, and conclusion. (4) *Evaluative Thinking.* This category identifies thought in terms of its judgmental nature and blocks the category into characteristics of verbal performance, such as unstructured, structured, and qualification. (5) *Divergent Thinking.* This category classifies thought sequences generated in a situation in which data is scarce and in which new directions or perspectives are taken. Its subcategories include elaboration, divergent association, implication, and synthesis.

Availability of measure: Aschner, Mary Jane. "The Analysis of Verbal Interaction in the Classroom." In *Theory and Research in Teaching,* edited by A. A. Bellack. New York: Teacher's College Press, Columbia University, 1963.

6. Ascription of Responsibility Scale (our label)

This instrument is included here because it deals with the consequences of interpersonal actions. It specifically assesses the extent to which responsibility for the consequences of interpersonal actions are ascribed to self or to outside factors. Explicit or implicit rationales for ascribing responsibility are expressed in terms of blame, fault, forgiveness, extreme provocation, absence of intentionality, illness, legality, and preoccupation. The instrument consists of twenty-four additional and self-descriptive items. It is scored in terms of the number of items for which responsibility for the consequences of interpersonal actions are ascribed to self. This instrument was developed and tested primarily on college-student samples. It exhibited adequate test/retest reliability, even over an elapsed time period of seven to ten months. A number of validity checks were

executed. The principal check demonstrated that high scorers (ascribing responsibility to self) behaved more cooperatively than did low scores in a "Prisoner's Dilemma" game, following trials in which the high scorers had gained at their partner's expense by competing while the partner cooperated. The assumption underlying this validity check was that individuals who ascribe responsibility to self for the consequences of interpersonal actions were likely to modify their own behavior when such behavior proved disadvantageous to another. The instrument appears to be a reasonably valid measure of a unique dimension of interpersonal competence, the ascription of responsibility for the consequences of interpersonal actions.

Availability of measure: Schwartz, S. H. "Moral Orientations and Interpersonal Conduct in Moral Encounters." Doctoral dissertation, University of Michigan, 1967.

7. Assessment of Children's Language Comprehension

The Assessment of Children's Language Comprehension (ACLC) attempts to determine the level at which a child is able to process and remember lexical items in syntactic sequence. It assesses understanding, not expressive language. The test has four subtests; one measures vocabulary development and receptive language skill, the other three measure aspects of language comprehension. The test also has five elements, spread throughout, that assess various aspects of the child's relation to the environment; these are agents, actions, relations, objects, and attributes. The test is appropriate for use with ages two through six. The ACLC consists of a series of plates and a recording sheet. It takes about ten minutes to administer. The average first or second grader should score perfectly. Raw scores are in the form of the percentage of correct responses for each subtest. The test's internal reliability is high. Insufficient information is available to adequately evaluate the validity of the instrument.

Availability of measure: Consulting Psychologists Press, 577 College Avenue, Palo Alto, California 94306.

8. Awareness of Consequences Test

This projective test, developed through sampling college students, assesses the extent to which an individual's decision-making process indicates awareness of the potential consequences of his or her behavior for the welfare of others. Responses are scored according to three dimensions: (1) considerateness, behavior intended to relieve or avoid aggravating the inferred distress of another person or group, (2) reliability, behavior intended to fulfill an obligation incurred toward another person or group, and (3) helpfulness, behavior intended to meet an expressed need of another person or group. Nine hypothetical incidents are presented in writing. The respondent is required to imagine self or a

with the decision to act in each hypothetical incident. The respondent describes the thoughts and feelings present in the minds of individuals facing the hypothetical decision situations. Subjects also respond to a series of statements requiring the endorsement, in varying degrees, of the actions contemplated by the central figure in the hypothetical incidents. Coders score subject responses for each of the three dimensions—considerateness, reliability, and helpfulness—on five-point rating scales. Interobserver reliability for two coders rating subject responses on the five scales reached ninety-three percent agreement within one scale interval. An argument for concurrent validity is supportable through demonstrated correlations of subjects' scores with peer ratings of subject behavior.

Additional information: Schwartz, S. H. "Words, Deeds, and the Perception of Consequences and Responsibility in Action Situations." *Journal of Personality and Social Psychology* (1968): 232–242.

9. BLB Geometric Figure Test

This is a version of a general procedure that has been used in both research and training. An individual is instructed to describe a preassigned geometric design to an audience. At the conclusion of the speaker's description, the audience is asked to duplicate the figure the speaker has described. This version is intended to be used with groups, each individual serving as a speaker once and as a listener to other members of the group. Accuracy scores are used to infer both encoding skills (accuracy of others when the subject is the speaker) and decoding skills (accuracy of the subject as listener, with others as speakers). Three levels of geometric figures are available. Scores are based upon the accuracy with which geometric figures are duplicated by listeners. Each listener's drawing may obtain a maximum score of eight points, with one point deducted for each of four types of error. Each speaker is scored by the total points of her or his audience. Each listener's score is compared with the other listeners' scores. The procedure was developed primarily for use with college undergraduates, but it may be considered applicable to other age groups. Some validation information is reported that demonstrates a correspondence between the total and level II listening scores for males and scores on the Brown-Carlsen listening test.

Additional information: Lieb-Brilhart, Barbara. "The Relationship Between Some Aspects of Communicative Speaking and Communicative Listening." *Journal of Communication* (1965): 35–46.

10. Barrett-Lennard Relationship Inventory

Developed to identify the extent to which a patient perceives certain attitudinal conditions in a therapist's communication, this instrument has been used in a variety of situations other than therapy. These other settings have

included parent/child and nurse/patient communication settings. The inventory consists of sixty-four statements, each rated by the respondent in terms of the attitudes exhibited toward the respondent by the other. The inventory yields four subscores: level of regard, empathic understanding, congruence, and unconditionality of regard. The four subscores reflect conditions hypothesized by Carl Rogers as instrumental to therapeutic growth and change. The theoretical assumption underlying the inventory is that these conditions must not only be present in the attitudes of the therapist but must also be communicated to the client, in order for growth and improvement to occur. Considerable information concerning the adequacy of this measure, and subsequent revision of it, is available. For some general information that might assist in deciding whether to use the inventory, under what conditions, and with what kinds of individuals, see Truax, Charles B., and Carkhoff, Robert R. *Toward Effective Counseling and Psychotherapy: Training and Practice* (Chicago: Aldyne, 1967).

Additional information: Barrett-Lennard, J. I., "Dimensions of Therapist Response as Causal Factors in Therapeutic Change." *Psychological Monographs: General and Applied* (1962): 76.

11. Basic Concept Inventory

This instrument represents an attempt to identify the extent to which a child is familiar with those basic concepts used in explanations and instruction in the first grade. It indicates whether a child is familiar with conventional statements and whether he or she can understand them. It also indicates whether the child can perceive the similarity of elements sequenced in a pattern and consequently can perceive other patterns when a teacher presents them in demonstrating a new concept. The subtests include (1) basic concepts, such as plurals, full statements, and recognition of inadequate information, (2) statement repetition and comprehension; and (3) pattern awareness. It is appropriate for preschool and kindergarten-aged children. The inventory must be given individually and requires an estimated twenty minutes per child. The child is asked to perform such tasks as naming from a picture, following directions, simple problem solving, sentence repetition, comprehension of words, and demonstration of competence in syllabic fusion. Considerable verbalization on the part of the child is required. The administrator must have practiced the test to insure accurate results. Usual information concerning test adequacies (reliability and validity) is not available. This test was developed as a "criterion-referenced" test; that is, items are developed in such a way as to assess specific skills that presumably must be present in order to meet particular educational objectives. The assumption is that, if the child has trouble with any item, the skill required in that item should be taught. For an explanation of the development of the test, see Engelman, Siegfried, *The Basic Concept Inventory* (Chicago: Follet, 1967).

Availability of measure: Follet Educational Corporation, Follet Publishing Company, 1010 West Washington Boulevard, Chicago, Illinois 60607.

12. Behavioral Assessment of Speech Anxiety

This instrument assesses anxiety in terms of its behavioral manifestations during a public-speaking situation. The specific behavioral dimensions addressed by this instrument are rigidity, inhibition, disfluency, and agitation. There are eighteen scales against which a judge or observer rates an individual's speaking behavior. Each scale consists of ten intervals. More than one rater is suggested. The training required to familiarize raters with the scales and to reach an acceptable level of interobserver reliability takes approximately three hours. The instrument was developed and tested through sampling undergraduate college students in fundamentals speech courses. Interobserver reliability across twelve raters was very high. Separate reliability estimates for the eighteen scales range from 0.70 to 0.96 (one scale, "swallows," produced a very low reliability coefficient). Evidence of validity is reasonably strong in two areas: (1) The dimensions being rated are derived from a very careful review of literature, and (2) evidence is reported concerning decreased anxiety scores on this instrument between the first and the fourth speeches in fundamentals classes, and the decreased anxiety scores derived from this rating procedure corresponded with decreased anxiety scores on a self-report measure. In addition, twelve raters employing this instrument were compared with eighteen observers who rated only overall anxiety, with high correspondence. A judging procedure has been employed for assigning rates to the eighteen scales by having judges indicate the importance of each scale in contributing to the decision of overall anxiety level. This instrument seems useful in isolating specific behavioral dimensions of anxiety. Consequently, it may be more useful in educational and training settings than would other measures of speech anxiety.

Additional information: Mulac, Anthony, and Sherman, Robert A. "Behavioral Assessment of Speech Anxiety." *Quarterly Journal of Speech* (1974): 134–143.

13. Biographical Survey III Scale

The scale assesses social competence in college males. It consists of twenty items, some in multiple-choice form, others requiring a numerical response. One point is assigned to each answer in the direction of social competence, hence the maximum score is 20. The items require reports of verifiable behavior or biographical information that reflected social participation, interpersonal competence, achievement, and environmental mastery. A conceptualization of social competence upon which the scale is based includes a history of frequent and positive social interaction with both sexes, participation in organizing and directing group activities, better-than-average academic influence and achievement, acceptance of authority, ability to discipline oneself, an unbroken and secure family background with definite indications that personal freedom and

responsibility have been encouraged, participation in athletic activities, some participation in socially desirable adult behaviors, such as church attendance, drinking, and interest in world affairs. This conceptualization of social competence clearly emphasizes extroversion, activity, and decision making. In general, the validation procedures reflect the same conceptual orientation. For example, fraternity members were asked to identify comembers with whom they would most and least prefer to double-date. The "most-preferred" members scored significantly higher on the competence measure than did the "least-preferred" members. Additional moderate evidence of concurrent validity is suggested through correspondence of social-competence scale scores with scores on other personality inventories. The validity of the measure, for social competence as conceptualized above, appears adequate. The internal reliability of the measure may be assumed to be adequate, since the test developers began with an initial item pool much larger and reduced the item pool through item-total correlations.

Additional information: Lanyon, R. I. "Measurement of Social Competence in College Males." *Journal of Consulting Psychology* (1967): 495–498

14. Brief Measure of Explorations of Preferences and Behavior

This self-report instrument is appropriate for research purposes. It focuses on the extent to which an individual seeks new encounters with others and new ways of performing activities or on a general propensity to engage in exploration behavior. It is included here because a substantial part of the instrument deals with social explanations. It contains items on which subjects report actual behavior and items directed toward the identification of preferences. The items on which behavior is reported are scaled in terms of the frequency with which the exploration behavior is emitted. The items on which preferences are reported are rated on Likert-type scales. The internal reliability of the social exploration subscale is 0.88. Some evidence concerning the discriminant validity of the items is presented, suggesting that social-exploration behavior and social-exploration preferences are, at least, moderately independent dimensions. This is a unique instrument, targeted toward a specified dimension of communication not assessed by other instruments reported here.

Availability of measure: Edwards, E. W. "Explorations and the High School Experience: A Study of Tenth Grade Boys' Perceptions of Themselves, Their Peers and Their Schools." Doctoral dissertation, University of Michigan, 1971.

15. Brown-Carlsen Listening Comprehension Test

This instrument assesses listening comprehension. It is broken into subscales for immediate recall, following directions, recognizing transitions, recognizing word meanings, and lecture comprehension. (See Bateman, Frandsen, and

Dedmon, *Journal of Communication* (1964): 183–189 for the results of a factor analysis of this test.) The examiner reads passages aloud, and the respondent marks answers on a separate answer sheet. Raw scores are transformed into percentile ranks. The test is normed for grades nine through thirteen. It has two equivalent forms. The correlation between equivalent forms is reported to be 0.78. Most of the reliability information on the measure deals with its internal consistency. Internal reliabilities are reported at 0.86. Norms are based on samples from twenty-five schools, covering sixteen states. Two thousand students constituted the norming base for each of grades nine, ten, eleven, and twelve. College norms are based on a sample of three-hundred freshmen.

Availability of measure: Harcourt, Brace, Jovanovich Inc., 757 Third Avenue, New York, New York 10017.

16. Carkhuff's Rating Scales

One of the better assessment procedures for rating effective communication in relationships, these rating scales require the use of trained observers. They are used most appropriately with adults. These scales may be used to assess the communication of empathy, respect, genuineness, and self-disclosure by having a trained rater make judgments concerning the level of a particular dimension communicated by one person in a relationship to the other person. In each instance, the ratings extend from one to five, with a rating of three regarded as the minimal level for facilitative interpersonal communication. Observers rate the interaction generated by two people either through unobtrusive observation (using one-way mirrors or microphones) or from tape recordings. "Empathic understanding in interpersonal processes" is rated from level 1 (in which one person does not attend to or detracts significantly from the expression of the other person) through level 3 (in which one person's response is essentially interchangeable with the expression of the other person) to level 5 (in which the first person adds significantly to the other's expression). "Communication of respect in interpersonal processes" is rated from level 1 (in which one person communicates a clearly negative regard for the other), through level 3 (in which one person communicates a positive concern for the feelings, experiences, and expressions of the second person), to level 5 (in which one person communicates a very deep caring for the human potential of the second person). "Facilitative genuineness in interpersonal processes" is rated from level 1 (in which one person's responses are clearly unrelated to what he or she is feeling or in which genuine, but negative, responses appear to be totally destructive to the second person), through level 3 (in which there is an absence of discrepancy between what the first person says and feels), to level 5 (in which one person is freely and deeply himself or herself, able to employ potentially hurtful responses in a constructive fashion). "Facilitative self-disclosure in interpersonal processes" is rated from level 1, (in which the first person actively attempts to remain unknown

to the other), through level 3 (in which one person volunteers relatively vague and abstract information about self), to level 5 (in which one person constructively volunteers intimate and detailed material about self). Both intraobserver and interobserver reliabilities for all of these scales are reported to be almost always over 0.70 and frequently in excess of 0.90. The early development and refinement of these scales was restricted primarily to therapeutic settings, and most of the validation information on the scales is restricted to therapeutic situations. There is an impressive amount of validation work that demonstrates that ratings are excellent predictors of client improvement on a variety of therapeutic outcome indices. Therapists rated high on the dimensions assessed by these scales seemed to promote more growth in clients than did therapists rated low. Recently, the use of these scales has generalized to nontherapeutic settings, particularly interpersonal relationships. Construct validity of these scales for assessing facilitative communication in relationships seems quite high.

Availability of measure: Carkhuff, R. R. *Helping and Human Relations*, vol. 2. New York: Holt, Rinehart and Winston, 1969.

17. CEPLI Verbal-Behavior Classification System

Designed for use in both research and training, this category system represents an attempt to simplify elements from other existing category systems. It may be employed by a single observer, who codes interaction as it occurs. It is designed for use in classroom and other instructional settings. It is a two-dimensional system consisting of four substantive categories and four process categories. The substantive categories focus upon what is happening and include categories that identify cognitive memory, productive critical thinking, expressed emotion, and class management. The process categories focus upon how the interaction treats the substance and include categories that identify seeking, informing, accepting or approving, and rejecting or disagreeing behaviors. The main feature of the category system is the fact that the substantive and process categories are arranged in the form of a four-by-four grid, yielding a total of sixteen categories. Each of these sixteen categories represent an intersection between one of the four types of substantive categories and one of the four types of process categories. For example, the intersection between the process category "seeking" and the substantive category "productive critical thinking" yields a category subscripted *ST*; it identifies interaction that asks for reasoning, explanation, interpretation, judgment, or evaluation. The intersection between the process category "accepts or approves" and the substantive category "expressed emotion" results in a category subscripted *AD*; it identifies interaction that approves or empathizes with the feelings expressed by another. The four-by-four grid represents all combinations of the four substantive and process categories. Although unusually simple, and based upon a relatively small number of categories, this system is one that deserves examination, both for its potential use

in research and for the utility, for training purposes, of the information it would generate. It makes reasonable distinctions about different contents of communication. It differentiates aspects of the normative process, accepting and rejecting. And it differentiates between two broad communicative functions, seeking and informing.

Availability of measure: "CERLI Verbal-Behavior Classifications System (CBC)." Northfield, Illinois: Cooperative Educational Research Laboratory, Inc., 1969.

18. Children's Audience Sensitivity Inventory

This self-report measure assesses predisposition to be anxious before observers. It contains three subscales: audience anxiety, exhibitionism, and self-consciousness. It consists of thirty-five items relevant to a classroom situation. Its development has been primarily for third, fourth and fifth grades. It requires approximately twenty minutes to complete. Each person's score is determined by the number of items to which he or she responds "true." Internal reliabilities range from 0.66 to 0.80. Test/retest reliabilities range from 0.45 to 0.62. Concurrent validity for the scale seems reasonably well established. Validation included demonstrating a correspondence (though moderate in strength) between selected subscale scores and the willingness to participate in a "skit night" at a summer camp.

Additional information: Paivio, Allan. "Child-rearing Antecedents of Audience Sensitivity." *Child Development* (1964): 397–416.

19. Children's Language Assessment—Situational Tasks

This is a general assessment procedure directed toward collecting language samples within normally operating classrooms. Four children and a teacher are recorded while engaging in three sets of activities: (1) Teacher and students examine the contents of a "mystery bag" containing twenty-seven common household objects. This first set of activities requires approximately fifteen minutes. (2) With an unfamiliar adult, the group examines a set of eight picture cards, apparently involving a task with no set solution. This second activity requires approximately fifteen minutes. (3) In the third activity, the students are left alone for approximately five minutes with the tape recorder running. The tape recordings are then returned to the Arizona Center for transcription and analysis. Teacher and child outputs are isolated for an analysis of basic language dimensions. This analysis produces scores on the following variables: average number of words per child, type/token ration, ratio of present verbs to total verbs, words not on Dolch Vocabulary List, number of complete T-units (a T-unit is the simplest part of a sentence that can stand alone, together with any subordinate clauses that may be grammatically related), percentage of complex

T-units, child-initiated questions, and assignments of words to cartoon characters and task-specific utterances to total utterances. The transcription and coding is conducted by a team of research assistants. Twenty percent of each staff member's coding is recoded by another assistant. Reliability of the coding is checked for each set of recordings analyzed by the Arizona Center. Intercoder reliabilities range from eighty-nine percent to one-hundred percent.

Availability of measure: Arizona Center for Educational Research and Development, University of Arizona, Tucson, Arizona.

20. Clozentropy/English Language Proficiency

Cloze procedure is a general measurement strategy, occasionally used to assess the acquisition or retention of information from stimulus messages. We are treating this particular use of the general strategy as a unique instrument, for two reasons: (1) The instrument focuses upon the ability of subjects to predict proper word usage from contextual cues. Its focus is upon the linguistic performance of foreign students, and, therefore, it represents a more-specific use of cloze procedures. (2) Darnell's use of cloze procedure for testing English-language proficiency of foreign students ultimately produces data of a different nature than that produced by the traditional use of cloze procedure. Four samples of prose, each five-hundred words in length, constitute the stimulus passages. Two passages are of engineering content, two of liberal-arts content. Every tenth word in each passage has been deleted. The passages are presented to two sets of respondents, a source pool (native speakers) and a subject group (foreign students). All respondents are required to "fill in the blanks," that is, to replace the words that have been deleted from the passages. Subject responses are presumed to be determined by the contextual cues available in the passage, as well as by predominant patterns of usage engaged in by the subjects. Responses of the native speakers (source pool) are used as the base against which responses of the foreign students (subject group) are compared. Thus, for each respondent in the subject group, a determination is made of the extent to which the subject's use of the English language corresponds to patterns of usage present in the comparison group of native speakers. The procedure is specifically designed for use with college students. Its reliability is reasonably high. Its concurrent validity with an existing measure (the Test of English as a Foreign Language) was consistently adequate. The procedure could be adapted, not only to testing a foreign student's English-language proficiency, but to assessing any individual's language usage in comparison with predominant patterns of usage in any criterion group.

Additional information: Darnell, Donald K. "Clozentropy: A Procedure for Testing English Language Proficiency of Foreign Students." *Speech Monographs* (1970): 36–46.

21. Coding Communication at the Relationship Level

A category system developed to describe patterns of relational communication, this coding scheme identifies communicative acts in terms of three classes of information: (1) source identification—coding the act according to who initiated it or according to a relevant characteristic (for example, sex) of the initiator; (2) form of speech—coding the act according to the form it takes: question, assertion, instruction, orders, talking over, assertion and question, question and assertion, other, laughter; (3) response—coding the act in terms of a response to a preceeding act: agreement, disagreement, extension, answer, disconfirmation, topic change, agreement and extension, disagreement and extension, other, laughter. Guidelines are presented for transforming the information recorded by this category system to another classification scheme, which codes the relational properties from continuous pairs of acts. Interobserver reliabilities for classifying acts of categories are reported to be very high (occasionally perfect). Application of the category system to the interactions of thirty couples with children under ten years of age, discussing three topics, resulted in two conclusions of potential import to the utility of the category system. The first conclusion was that patterns of relational communication remained consistent across the three topics. The second conclusion was that significant differences in patterns of relational communication occurred between couples from different socioeconomic classes. This category system seems capable of generating reliable information, information that is interpretable within a conceptual framework that allows for inferences about the nature of relational communication.

Additional information: Mark, Robert A. "Coding Communication at the Relationship Level." *The Journal of Communication* (1971): 221–232.

22. Communication of Affect Receiving Ability Test

The instrument was developed to assess sensitivity to nonverbal expressions of others. The test takes approximately twenty minutes to complete. It is especially practical for administration in group settings, since stimulus items are presented on film. A film was made of students reacting to slides. The slides consisted of stimulus items in four categories: sexual, scenic, unpleasant, and unusual. Respondents are asked to identify the category being reacted to by the students on film. Respondents are also asked to rate the pleasantness/unpleasantness of stimulus items being reacted to. Two scores are generated: the number of correct identifications of the category of stimulus items being reacted to by the students on the film and the pleasantness/unpleasantness rating of the stimulus item. Test/retest reliability is adequate (0.80) for the identification of categories but very low (0.16) for the pleasantness/unpleasantness rating.

Additional information: Buck, Ross. "A Test of Nonverbal Receiving Ability: Preliminary Studies." *Human Communication Research* (1976): 162–171.

23. Communication Rating Scale

A version of an earlier scale, but further refined with a sample of graduate students in counseling, this assesses communication effectiveness in counseling interviews. It consists of fifty weighted items used to produce three ratings: (1) a self-rating, (2) a peer group rating, which is the mean of the pooled total weighted scores received by each trainee from other trainees in his or her class, and (3) the criterion rating, which is the mean of the pooled total weighted scores received by each trainee from two or more judges. Self-ratings do not appear to be an adequate measure of communication effectiveness, since trainees rate themselves consistently high. Additionally, there is relatively little correspondence between self-ratings and either peer-group ratings or ratings by judges. If peers are allowed to listen first to each other's recorded interviews and case presentations, then peer ratings correspond well with judge ratings. For rater reliability, correspondence between independent judges' ratings of the same trainee are high. The communication rating scale appears to be a reasonably good measure of the effectiveness with which communication occurs in a counseling setting.

Additional information: Brams, J. M. "Counselor Characteristics and Effective Communication in Counseling." *Journal of Counseling Psychology* (1961): 25–30.

24. Communicative Evaluation Chart from Infancy to Five Years

This communication evaluation chart is a reasonably simple and usable form on which observations of a particular child are recorded by an evaluator. The chart identifies a number of communicative behaviors—in some cases language behaviors—that should be present at each of nine time periods during the development of a child from infancy to five years. Each of these behaviors or characteristics is recorded as being present, not present, or fluctuating. The chart is organized by time periods: three months, six months, nine months, one year, one and one-half, two, three, four, and five years. It is also organized by placing the items to be observed in two columns: one column represents the normal development and comprehension of language as a communication tool. The other column identifies characteristics of physical growth and development, motor coordination, and visual/motor responses. Therefore, for each time period, a child's development may be recorded in terms of communicative behavior and may be compared with the child's development of noncommunicative behavior during the same time period. Discrepancies between the two columns, as well as the presence and persistence of "nonpresent" and "fluctuating" marks for the child on items, are indications that more-specific diagnostic examinations may be necessary or that immediate help should be obtained. This chart may be used by specialists in many fields. It is designed to yield a quick

appraisal or an overall impression of a child's development in communication, language, and related areas. The items appear to be well chosen and have been derived from research on child development and clinical experience in working with young children.

Availability of measure: Educator's Publishing Service, Inc., 75 Mouton St., Cambridge, Massachusetts 02138.

25. Cooperative Primary Test

The Cooperative Primary Test assesses, among other things, listening, word analysis, reading, and writing skills. The overall focus of the test is on errors, and the interpretation of errors makes this a useful diagnostic test, especially as it relates to the assessment of communication skills. It is leveled predominantly at grades one and two, and it contains two forms: level one (1.5–2.4) and level two (2.5–3.0). It is a comprehensive test with an administration time of three hours, twenty minutes for level one, and four hours, ten minutes for level two. The test, however, can be administered by subtest (for example, listening only), with considerable reduction of testing time. The scores are transformed to midpercentile ranks based upon norms generated from a nationwide probability sample of school districts having over three-hundred students. There are norms for both fall and spring samples. Caution should be exercised in directly comparing fall and spring norms, since the two samples are not directly comparable in representativeness and follow slightly different sampling plans. Test/retest reliabilities are good, and reviewers have judged the content validity of the test very favorably. It is probably one of the best listening tests for the very early grades.

Availability of measure: Cooperative Tests and Services, Educational Testing Service, Princeton, New Jersey 08540.

26. Dogmatism Scale—Form E

An instrument used frequently in communication research, the dogmatism scale is considered, at its general level, to be a measure of intolerance toward those with differing belief systems. It is a generalized measure of the extent to which an individual maintains an open belief system. The construct "dogmatism" contains many dimensions, such as the tendency to respond to message content rather than to perceptions of source characteristics, of potential interest to communication researchers. It is a self-report instrument, consisting of forty items responded to on a six-point rating scale. It yields a single summated score, representative (again, at the most general level) of an individual's intolerance for, and propensity to defend against, information or ideas discrepant with existing beliefs. Arguments have been advanced that the dogmatism scale reflects a leftist bias, that is, that subscribers to rightist political ideologies are more likely to score

high on the scale. However, the validation studies with which we are familiar have, as often as not, supported the dogmatism scale as being reasonably free of political ideology. Recently, evidence has accumulated that dogmatism-scale scores tend to correlate moderately to highly with acquiescence. The dogmatism scale has undergone extensive and careful scrutiny. We would interpret the bulk of the validation information to support its adequacy. It may be regarded as a measure most appropriately used in descriptive research, with college-age and adult samples.

Availability of measure: Rokeach, Milton. *The Open and Closed Mind.* New York: Basic Books, 1960.

27. Facial Meaning Sensitivity Test

Designed as a teaching tool and appropriate for age groups from high school to adult, this instrument assesses an individual's ability to encode and decode meanings conveyed by facial expressions. The instrument is directed specifically toward assessing nonverbal receiving ability. It consists of forty photographs presented in three series. Part one consists of ten photographs, representing ten basic classes of facial meaning. Part II has thirty photographs, three in each of the ten basic categories. Part III consists of the same thirty photographs presented in Part II, but subjects are asked to respond to each of the thirty photographs separately. The instrument is scored in terms of the frequency with which correct identifications are made. Some normative data are reported. This data consists of average percentages of correct identification, for a variety of groups, over the three parts of the instrument. It is designed to be used as a teaching tool.

Availability of measure: Leathers, Dale. *Nonverbal Communication Systems.* New York: Allyn and Bacon, 1976.

28. Flanders System of Interaction Analysis

The Flanders System of Interaction Analysis is the most widely used system for categorizing interaction in classroom settings. It contains only ten categories. A considerable number of category systems are derivations—extensions or variations—of this one. It is used for both research and training purposes. It may be employed by one observer, coding interaction as it occurs. It is capable of yielding both frequency distributions for categories and contiguities (a record of the sequence of verbal acts engaged in by teacher and students). The category system is an unusually simple one. It differentiates first between teacher talk and student talk. Teacher talk is subdivided into two general categories, indirect influence and direct influence. Indirect influence contains four specific categories: accepts feeling, praises or encourages, accepts or uses ideas of student, asks questions. Direct influence is divided into three specific categories: lecturing, giving directions, and criticizing or justifying authority. Although the category system itself contains no

explicit judgment concerning the appropriateness or productivity of the indirect influence or direct influence categories, the accumulated research findings using this category system strongly suggest that teacher behavior falling in[illegible] categories characterized by indirect influence are associated with a range of positive educational outcomes. The student-talk dimension is subdivided into only three categories: student talk—response, student talk—initiation, silence or confusion. An expanded version of this category system, also developed by Flanders, is described in the material cited under availability.

Availability of measure: Flanders, Ned A. *Analyzing Teacher Behavior*. Reading, Massachusetts: Addison Wesley, 1970. Flanders, Ned. *Interaction Analysis in the Classroom: A Manual for Observers*. Ann Arbor: School of Education, University of Michigan, 1966.

29. Houston Test for Language Development

Part 1 covers language development in very young children (six months to three years), and part 2 covers language development in children aged three years to six years. The test consists of vocabulary items, ratings scales for types of vocalizations, identification of body parts and gestures, geometric drawings and designs, counting, and the generation of a language sample of ten responses. It requires approximately forty minutes to administer. The norms were established on small samples. Information on the adequacy of the measure is very limited, although interobserver or interscorer reliability for part 1 is reported to be adequate (0.8 correlation for independent examiners). A usable instrument if results are interpreted cautiously.

Availabilility of measure: Crabtree, Margaret C. "The Construction and Trial Study of a Language Development Test for Children up to Three Years of Age." Doctoral dissertation, University of Houston, 1957. Also, Houston Test Company, Houston, Texas.

30. Illinois Test of Psycholinguistic Abilities

Prepared for ages two through ten, the Illinois Test of Psycholinguistic Abilities is used to identify the development of communication abilities and deficiencies. It is one of the better developed and refined measures of communicative functions. Its subtests include: (1) The receptive process, which concerns abilities to comprehend visual and auditory symbols. The Auditory Receptive subtest measures the ability of a child to derive meaning from orally presented material. The Visual Receptive subtest assesses the ability of the child to gain meaning from visual symbols. (2) The organizing process, which consists of two subtests. The Auditory Vocal Association subtest assesses the ability to relate to concepts presented orally, using a sentence-completion technique. The

Visual Motor Association Subtest assesses the ability to relate to concepts presented through pictures. (3) The expressive process, which consists of two subtests. The Verbal Expression subtest assesses the ability to present concepts verbally; the Manual Expression subtest assesses the ability to express ideas manually. (4) Closure, which concerns the ability to fill in missing parts in incomplete pictures of verbal expressions. Grammatic closure assesses the child's ability to make use of the redundancies of oral language in acquiring automatic habits for handling syntactic and grammatic inflection. This contains two parts, auditory closure and sound blending. The Visual Closure subtest assesses the ability to identify a common object from incomplete visual presentation. (5) Sequential Memory, which concerns the ability to reproduce a sequence of auditory or visual stimuli. The Auditory Sequential Memory subtest measures the ability to reproduce sequences of digits from memory. The Visual Sequential Memory subtest measures the ability to reproduce a series of nonmeaningful figures from memory. The test consists of a series of materials in kit form. The administration of the test requires forty-five to sixty minutes for an experienced administrator. The administrator should have practiced administering the test, since standard procedures must be followed stringently. Many subtests require practice for smooth administration. The raw scores are recorded on a score sheet, then are transferred to a summary sheet to yield: (1) psycholinguistic age for each subtest, (2) scale score for each individual, (3) composite linguistic age, (4) mental age (Stanford-Binet) estimates. Background work on the adequacy of the measure and normative data associated with it are impressive. It is one of the better measures, both in terms of construction and refinement, of the development of communicative ability in children.

Availability of measure: Examiner's kit, record forms, monograph of selected studies, and manual are available from the University of Illinois Press, Urbana, Illinois.

31. Ilyin Oral Interview (1976 edition)

The Ilyin Oral Interview (1976 edition) assesses aural-oral communicative abilities. It is essentially a listening test. There is one form used for placement purposes, and one (with alternate pretest and posttest forms) for achievement testing. The test centers around pictures of experiences in the life of a single character. The pictures serve as stimulus items, and the subjects respond to examiner's questions with written responses. The instrument contains fifty questions, graded by difficulty. Each response is scored across three scale intervals, depending upon whether the responses contain correct information or errors—primarily mistakes in grammar. The test is appropriate for use with high school and college students. Reliabilities (presumably internal) range from 0.85 to 0.98. Concurrent validity is high with other measures of similar abilities, as well as

with teacher and student evaluations of the subject's abilities. Because the questions elicit responses that are scored in terms of specific errors, the test may be used for placement purposes.

Availability of measure: Newbury House Publishers, 68 Middle Road, Rowley, Massachusetts 01969.

32. Infant Adaptation Scales

This instrument is used with infants nine to thirty months old. It attempts to identify the extent to which infants exhibit appropriate adaptation to physical environments and to other people. It consists of a series of items rated on a five-interval scale. Each of the items is rated in terms of the degree of adaptation exhibited by the infant with respect to that item. The scale ranges from a low point (low adaptation) through a middle point (optimal or ideal functioning) to a high extreme (unregulated adaptation, inappropriate functioning). The instrument is included here because a number of items are directed toward the quality of attachment relations with a familiar adult. Verbal interaction is a specific focus of one part of the instrument. Interrater reliability is reported at 0.90. It seems to have been developed primarily for research purposes.

Additional information: Fowler, W. "A Developmental Learning Approach to Infant Care in a Group Setting." *Merrill-Palmer Quarterly* (1972): 145–175.

33. Interpersonal Checklist

Derived conceptually from the early work of Timothy Leary, this inventory consists of 134 items presented in true/false form. It is directed toward the analysis of interpersonal behavior in terms of eight pairs of variables: blunt/aggressive, competitive/exploitive, managerial/autocratic, responsible/overgenerous, cooperative/over-conventional, docile/dependent, modest/self-effacing, and skeptical/distrustful. The inventory is related conceptually to functional communication in the sense that the interpersonal variables are conceived of as having different intensities, some of which indicate an abnormal degree of the particular variable. The respondent is first asked to describe herself or himself in terms of the 134 items, then to describe a series of others (parent, spouse, and so on), as well as his or her own ideal. Approximately ten to fifteen minutes is required for the description of each target person. IBM answer sheets are available that allow up to five target persons to be described at one test administration. Scores are yielded for sixteen interpersonal variables and for four summary scores: dominance, love, average intensity, and the number of items checked. Results can be plotted on a circumplex chart. Most test/retest reliabilities are in the 0.70s. Considerable validation work has been done on the

inventory; there is strong evidence of its construct validity. Its utility as a measure for research purposes has been well established.

Availability of measure: Psychological Consultation Service, 1230 Queens Road, Berkeley, California 94708.

34. Interpersonal Communication Inventory

This self-report questionnaire consists of fifty items, either attitudinal in nature or descriptive of the subject's patterns, characteristics, and styles of communication. The items are directed toward the ability to listen, to understand, to emphasize, to handle angry feelings, to express oneself, and conversational attributes. The inventory requires seventh-grade reading ability and is recommended for respondents high school age and older. It was developed by sampling the responses of 316 subjects between the ages of seventeen and sixty-four, with a median age of twenty-eight. Relatively little information is available on the adequacy of the inventory as a measurement device. However, the final fifty-item inventory is the result of reducing a larger pool of items through item analysis. Consequently, the instrument, in its present form, may be considered appropriate for self-assessment, as a training or teaching aide or as a descriptive, rather than diagnostic, entry to counseling.

Additional information: Bienvenu, Millard J. "An Interpersonal Communication Inventory." *The Journal of Communication* (December 1971): 381–388.

35. Interpersonal Competence Scoring System

This is a coding system; consequently, the corpus of material to be scored is generated by the user. Behavior to be coded is classified according to three subsystems: (1) Behaviors describing the individual. Behavior is coded as owning up to or not owning up to ideas or feelings, open or not open to ideas or feelings, experimenting or rejecting, and experimenting with ideas or feelings. (2) Behaviors relating the individual to others. Behavior is coded as helping others to own up, helping others to be open, helping others to experiment, and the opposite of each of these. (3) Behaviors reflecting six norms: individuality, conformity, concern, antagonism, trust, and mistrust. After coding the corpus of material (tape recordings or transcripts), frequencies are tabulated for each category. Frequencies are then multiplied by assigned ratings, and the scores are summed to produce four major scores: individual interpersonal positive, individual interpersonal negative, norms positive, and norms negative. These four rated scores are used to produce an index of competence for each individual. These individual indices of competence may then be summed to produce a group competence profile. Interobserver reliabilities are usually

reported in the 0.80s and 0.90s. Validation work on the coding system has involved management groups and participants in T-groups. Predictive validity (focusing on anticipated changes in competence scores) was established for the management group, and concurrent validity (correspondence between competence scores and staff ratings of competence) was established for the participants in T-groups.

Additional information: Argyris, Chris. *Organization and Innovation.* Homewood, Illinois: The Dorsey Press, 1965.

36. Interpersonal Perception Method

This instrument consists of 720 questions, requiring approximately seventy minutes to complete, responded to by each member of an interpersonal pair. Questions revolve around sixty issues grouped into six categories: interdependence and autonomy; warm concern and support; discouragement and disappointment; contentions—fight/flight; contradiction and confusion; extreme denial of autonomy. Questions concerning the sixty issues are presented in such a way as to tap three perspectives: (1) direct perspective—person A's view of issue X; (2) Metaperspective—person A's view of B's view of A's view of X. Although these perspectives seem complicated as described here, they may be easily understood in terms of the conceptual framework presented in the work cited under availability. This general assessment procedure yields four specific measures of potential interest to researchers in interpersonal communication. "Agreement or disagreement" is analyzed by comparing one person's direct perspective and the other person's direct perspective on the same issue. "Understanding or misunderstanding" is analyzed by comparing one person's metaperspective and the other person's direct perspective on the same issue. "The feeling of being understood or of being misunderstood" is analyzed by comparing one person's metaperspective and direct perspective on the same issues. "The realization or failure of realization of understanding or misunderstanding" involves a comparison across all three perspectives. Considerable information on the adequacy of these measures is available in the volume cited under availability. This is a complicated assessment procedure, but it can readily be understood and used because of the clear and detailed procedures and the conceptual framework presented in the general volume.

Availability measure: Laing, R. D.; Phillipson, H.; and Lee, A. R. *Interpersonal Perception: A Theory and Method of Research.* New York: Springer Publishing Company, 1966.

37. Intimacy Scaled Stimuli

This assessment procedure is an item pool that may be used as a source in

developing self-disclosure instruments, studying interpersonal intimacy, conducting laboratory training, and other such uses. The items are grouped by topic: religion, love and sex, family, parental family, hobbies and interests, physical appearance, money and property, current events, emotions and feelings, relationships with others, attitudes and values, school and work, and biography. The items have been scaled for intimacy; that is, the items are weighted for the degree of intimacy implied for a relationship if the item has been discussed by the relationship pair. An item's scale value was derived from judgments made concerning the degree of intimacy implied by the item. The judgments were made by two groups, college students and sailors. An original pool of 671 items was reduced to 497 according to a criterion based upon the extent to which independent judges agreed in their responses to the item. Intimacy-scaled stimuli do not represent a formal test or finished measure. Rather, they represent a pool of items that may provide valuable assistance to individuals wishing to create a measure of self-disclosure or of relational intimacy.

Availability of measure: Taylor, D. A., and Altman, I. "Intimacy Scaled Stimuli for Use in Studies of Interpersonal Relations." *Psychological Reports* (1966): 729–730. Also Document #8964, ADI Auxillary Publications Project, Photo Duplication Service, Library of Congress, Washington, D.C. 20540.

38. Jones-Mohr Listening Test

Developed primarily for use in teaching and training, the Jones-Mohr Listening Test may be regarded as a measure of empathic listening. It is most suited for use with college and adult populations. It consists of two forms, each of which contains thirty stimulus items. In the original development of the test, a list of fifty basic emotions served as the basis for the development of items. Six phrases were written for each of the fifty basic emotions. The phrases are presumed to be typical of everyday situations. Six actors (three male and three female) each recorded one of the phrases for each of fifty emotions. The resulting three-hundred recorded statements were eventually reduced to the final sixty items constituting the two forms of this test. Each item has been recorded in such a way as to convey a particular emotion. Items are presented by audiotape. Response forms for each test, with a multiple-choice format, contain four alternatives for each item. One alternative is the correct one. The remaining three alternatives are described as plausible, yet they are as different from the correct item as possible. A person's score is the number of correct alternatives chosen. There is little information available on the adequacy of the measure. Nonetheless, it is a well-conceived, carefully developed, and attractively packaged test for training and teaching purposes.

Availability of measure: University Associates Publishers and Consultants, 7596 Eads Avenue, La Jolla, California 92037.

39. Jourard Self-Disclosure Questionnaire

The early version of the Self-Disclosure Questionnaire consists of sixty items. It assesses self-disclosure of attitudes and opinions, tastes and interests, work or study, money, personality, and body. Respondents report the extent to which self-disclosure on these subjects has occurred toward four targets: mother, father, best male friend, best female friend. Thus, for all subjects, 240 responses are required. The respondent rates each item for each target in terms of the level of disclosure involved, ranging from "have told nothing about this aspect of me" or "lied or misrepresented" (both scale intervals scored as 0) to "full and complete" disclosure, scored as 2. The original version of this instrument was developed and tested on college-age adults. Its internal reliability is reported to be 0.94. There is considerable evidence of its concurrent and construct validity. For example, the more positive the responses on a "parent-cathexis" questionnaire, the greater the indicated level of self-disclosure to parents. A shorter form of this questionnaire was reported in 1961. It employed twenty-five items and was tested initially with nursing students. Validation of this short form was based on the assumption that those who disclosed more were more apt to be viewed by teachers as having mastered the necessary interpersonal skills for nursing. The correlation between grades in nursing courses and disclosure was reported to be 0.78. These measures of self-disclosure, though early ones, are still widely used. See also "Self-Disclosure Questionnaire," a related instrument reported in this book.

Availability of measure: Jourard, S. M., and Lasakow, P. "Some Factors in Self-Disclosure." *Journal of Abnormal and Social Psychology* (1958): 91–98; and Jourard, S. M., "Self-Disclosure Scores and Grades in Nursing College." *Journal of Applied Psychology* (1961): 244–247.

40. Kohn Social Competence Scale

Appropriate for use with children from three to six years old, the instrument calls for teacher ratings of children in kindergarten or preschool settings. There is a long (seventy-three-item) and a short (sixty-four-item) form. Both forms require ratings of the child's social-emotional functions. The development of the instrument on ratings applied to a large sample of children in public day-care centers resulted in the identification of two factors being rated. The first factor represents an interest/participation versus apathy/withdrawal dimension of social-emotional functioning. The second factor represents a cooperation/compliance versus anger/defiance dimension. Specific items are distributed across these two factors, and each item is rated on a seven-point scale. The content of the items and the bipolar nature of the factors assessed by those items both imply strong normative judgments concerning the adequacy or appropriateness of the child's social-emotional functioning. Interrater reliabilities are

reported to be 0.77 for the first factor and 0.80 for the second factor. Scores derived from this instrument are stable for children from preschool to early elementary years. In validation studies, scores accurately distinguished normal and emotionally disturbed children, predicted certain aspects of the child's cognitive functioning and school achievement, and corresponded to different patterns in the early mother/child relationship. The instrument was developed carefully and tested with good results. It seems an adequate measure of social competence for the early years, for social competence conceptualized in terms of the two factors identified above.

Additional information: Kohn, M., and Rosman, B. L. "A Social Competence Scale and Symptom Checklist for the Preschool Child: Factor Dimensions, Their Cross-Instrument Generality, and Longitudinal Persistence." *Developmental Psychology* (1972): 430–444.

41. Language Ability Test of the Language Arts Test

The Language Ability Test has two major objectives: (1) to assess the student's understanding of the basic structure of the English language and (2) to assess the student's abilities to use sentence elements effectively in standard patterns. Of the fifty-eight items constituting this test, fourteen are devoted to basic structure and the remaining forty-four are devoted to the use of sentence elements. It is directed toward use in grades seven through nine. Directions for setting up and administering the test are quite explicit. Test scores can be reported in one of four ways: raw scores, within-grade percentiles, within-grade standards, and across-grade standards. It requires about forty minutes to administer. The validity of the test appears to be primarily of the content type, since the items were developed from an analysis of leading textbooks and were refined by examination by experts. Internal reliability ranges from 0.84 to 0.95. The test seems appropriate for assessing achievement, though somewhat less appropriate for diagnostic interpretation of individual subject scores. Data on standardization appears to be adequate, except that there is a general overrepresentation of rural communities and an underrepresentation of metropolitan communities.

Availability of measure: Houghton Mifflin Company, 2 Park Street, Boston, Massachusetts 02107.

42. Language Communication Skills Task

The purpose of the Language Communication Skills Task (LCST) is to study the nature of language communication among young children in order to assess their language competencies. Language competencies in this test are defined as the competencies required in interindividual communications. The LCST was designed to assess the young child's ability (1) to derive meaning and ideas from his or her sociolinguistic situation, (2) to transmit these meanings and ideas to

others, (3) to respond to the language behavior of others, and (4) to adapt communicative input to achieve effective language communication. The general assessment procedure includes two parallel sets of tasks. These tasks were designed to measure the child's communication skills both as a speaker and as a listener. The material used in each communication task includes two identical colored drawings of familiar settings, classroom and kitchen, mounted on magnetic chalkboards. The test was designed for administration to one pair of children at a time, one in the presenter role and the other in the receiver role. Each child has the same scene, and it is the task of one to tell the other where to place objects in the scene. The measures derived include four subscores: the presenter score, the receiver score, the mean score, and the criterion score. The task is designed for use with children in kindergarten and primary grades. Information concerning the adequacy of the measure is somewhat sparse. It was used to collect data on a sample of 112 children in a Pittsburgh elementary school. Internal reliability coefficients are reported to be in the 0.70s. Validation information is limited. What information there is on the adequacy of the measure is encouraging. This assessment procedure is worth exploring, simply because it is one of the few direct measures of both source and receiver communication skills for young children.

Availability of measure: Learning Research and Development Center, University of Pittsburgh, Pittsburgh, Pennsylvania.

43. Leathers' Nonverbal Feedback Rating Instrument

Appropriate primarily for use in teaching and training settings, this instrument assesses the dominant meaning contained in the nonverbal portion of a feedback response. It is intended to provide users with detailed information about feedback to their own communication. A videotape is made of a subject talking to another person. The subject rates the feedback exhibited by the other individual, on ten semantic differential scales. These scales are arranged in four categories, which include (1) involvement, assessed through scales bounded by involved/withdrawn, responsive/unresponsive, attentive/inattentive, and interested/disinterested; (2) feeling, assessed through scales bounded by pleased/displeased and friendly/hostile; (3) analysis, assessed through scales bounded by deliberative/spontaneous and analytical/impulsive; (4) control, assessed through scales bounded by confident/uncertain and clear/confused. The ratings are both generated and interpreted by the subject. The instrument seems intended to structure the perceptions of the subject in viewing feedback exhibited to him or her. In its present form, the instrument seems limited to teaching and training settings and should be regarded as an instructional aide.

Availability of measure: Leathers, Dale. *Nonverbal Communication Systems*. New York: Allyn and Bacon, 1976.

44. Linguistic Ambiguity

At elementary-school levels, this instrument assesses the ability to detect linguistic ambiguity. It is included here for two reasons. (1) The ability to detect and resolve linguistic ambiguity may be considered an important dimension of the development of receptive language. (2) Some researchers, especially psycholinguists, are investigating linguistic ambiguity because they consider linguistic ambiguity an important construct in understanding the processing and interpretation of sentences. The test consists of four parts, each corresponding with a type of linguistic ambiguity. Each part contains six sentences that the child is asked to rephrase in his or her own words. The score obtained is the number of linguistic ambiguities detected. The four types of linguistic ambiguities are (1) lexical ambiguity, present when a given lexical item has more than one semantic interpretation ("club" can be a group of people or a heavy stick); (2) phonological ambiguity, present when a given phonological sequence can be interpreted in more than one way (the doctor is out of patients/patience); (3) surface-structure ambiguity, present when words in a sentence can be grouped in two different ways (he sent her kids story books); (4) deep-structure ambiguity, present when two different deep structures are mapped on a single surface structure (the duck is ready to eat). Information on the adequacy of the measure is extremely sparse, although interobserver reliability in the scoring of correct versus incorrect subject responses is reported to be perfect. Given the unusually high degree of face validity in the items, interobserver reliability may well be considered the most important evidence of both the adequacy and the utility of this instrument.

Additional information: Schultz, Thomas R., and Pilon, Robert. "Development of the Abilities to Detect Linguistic Ambiguity." *Child Development* (1973): 728–733.

45. Machiavellianism Scale (Mach IV)

This instrument has been used occasionally to examine the effects of, and to predict success in, communication coursework at the college level. It is an attempt to assess the extent to which an individual views others primarily in terms of their usefulness for his or her own purposes. There are several versions of this scale, one of which is appropriate for use with children, but Machiavellianism scales are used predominantly with adults. The Mach IV is a twenty-item scale, requiring the respondents to indicate agreement or disagreement with the items. Another version of the scale, Mach V, is designed to overcome social-desirability responses, which might be assumed to exercise considerable influence on the way an individual responds to the items in Mach IV. Reliabilities for Mach IV are reported in the 0.70s, and reliabilities for Mach V are reported in the 0.50s (internal reliabilities). Of the two most-frequently used versions of the scale, each

has advantages. The advantage of Mach IV is its higher reliability. The advantage of Mach V is its control of social-desirability responses. Validation work on the Mach scales is impressive, particularly with respect to the predictive validity of the scales. Many of the validation studies reported in the volume cited for additional information demonstrate differences between high and low scorers in terms of observable behaviors.

Additional information: Christie, R., and Geis, F. L. *Studies in Machiavellianism*. New York: Academic Press, 1970.

46. Measurement of Semantic Habits

This instrument assesses the propensity to use different modes of semantic response to objects in the human and material environment. The instrument is subscaled to focus on four dimensions of semantic response: positive evaluations, negative evaluations, observable denotative attributes, and categorization. Requiring approximately fifteen minutes to complete, 143 forced-choice responses are called for, each response indicating a selection of one dimension over another. Three scores are produced: overall positive evaluation, overall negative evaluation, and a "balance" score of categorization and denotative attributes. These three scores all have internal reliabilities of approximately 0.80. Results of an item analysis are reported, as well as norms. The instrument is apparently intended for use with adults.

Additional information: Nunnally, J. C.; Flower, R. C.; and Hodges, W. F. "Measurement of Semantic Habits." *Educational and Psychological Measurement* (1963): 419–434.

47. Measurement of Social Intelligence

This multidimensional measure assesses what the authors call "behavioral cognition," what we have called "empathic ability". Six dimensions are represented in this measure: (1) units representative of facial, vocal, gestural, or postural expressions; (2) classes, in which a respondent discriminates a particular response from a set of responses; (3) relations—social relationships; (4) systems—sequences of social behavior; (5) transformation—focusing on flexibility or creativity; and (6) implications—judging antecedents or consequences. This is a multifaceted test with stimulus items composed from tape-recorded sentences, sounds, words, photographs, drawings, stick-figures, and so on. The responses are mostly to multiple-choice items. Some of the scoring requires analysis of written responses. The measure was refined from a very large initial item pool by means of item analysis. Norms are based upon middle-class eleventh-grade students. Internal reliabilities for the various parts of the measure are comparatively low, but external reliabilities (interscorer) are reasonably high. Validation work on the measure has apparently centered on its construct validity. The construct

"behavioral cognition" is a very complex one, judging from the high number of factors discovered (nineteen) in a factor analysis of various parts of the measure. We found no other measures of empathic ability as comprehensive as this one. This measure should be of interest to readers for several reasons. It represents a serious and energetic attempt to explicate a complex construct, and it is one of the few reasonably adequate available measures for empathic ability that is not based solely upon the accuracy of the judgments of a target person.

Availability of measure: Sheridan Supply Company, PO Box 837, Beverly Hills, California 90213.

48. Message Preferences

This instrument generates judgments concerning the appropriateness of particular messages for specific relationships. The procedure was used with two age groups, boys eight to ten years old and eleven to thirteen. It was used to investigate four relationships: mother, best friend, favorite boys-club member, and a policeman. Ten message categories were investigated: (1) strength-protection, (2) strength-control, (3) affection, (4) handling anger, (5) growing-up/independence, (6) sex role, (7) mutual enjoyment, (8) understanding of feelings, (9) identity, (10) impersonal objects. A set of statements is presented on cards. The subject sorts the cards according to how good or bad he would feel if a particular source (one of the four identified) were to have made the statement to him. The assessment procedure yields ratings or evaluation of particular messages in terms of their appropriateness in particular relationships. Information concerning the reliability and validity of the measure is not sufficient to allow for any conclusions concerning its adequacy.

Additional information: Helper, M. M. "Message Preferences: An Approach to the Assessment of Interpersonal Standards." *Journal of Projective Techniques and Personality Assessment* (1970): 64–70.

49. Metropolitan Readiness Test

The Metropolitan Readiness Test is designed to measure readiness for first-grade instruction and to provide teachers with information helpful in classifying pupils. It is included here because among its subtests are word meaning and listening. It was constructed in 1933 and revised in 1969. The test requires approximately sixty minutes in three sessions. Scores on the subtests combine into a total score that is classified into one of five ratings. The five ratings represent levels of readiness for instruction and include ratings that imply assignment to slow sections or the need for individual instruction. The manual contains considerable information bearing on its construct, content, and predictive validity. Reliabilities are consistently high for the total test. Subtest

reliabilities are lower. Unfortunately, the lowest internal reliability is for the listening subtest (0.50).

Availability of measure: Harcourt, Brace and Jovanovich, 757 Third Avenue, New York, New York 10017.

50. Modes of Communication

This category system is appropriate primarily for research purposes. It is a complicated system requiring coding from video or audio tape. The system is designed for the analysis of interaction between teachers and students, specifically in religious school settings, but it might be easily modified for application to other settings. Its focus is upon what are called "modes of communication," conceived of in terms of four broad categories. (1) *Subjective mode*. Subjective mode refers to communication wherein the primary referent of the language is self. The subjective mode is further divided into categories that identify communicative acts as self-referred, private expression, and perceptual or imagery-reference. Each of these categories is, in turn, further differentiated. (2) *Empirical mode*. Empirical mode refers to communication wherein the person speaking focuses attention upon the other. Language employed is referenced to real persons or objects presumed to be recognizable by the other. This broad category is further divided into "descriptive of others present" and "describes remote fact." The second of these categories is further differentiated. (3) *Interpretive mode*. Communication classified as falling within this mode focuses upon similarity of thought processes. This broad category includes numerous subcategories, such as causality, generalizations, hypothesis, principles, meaning statements, possibility statements, and a great many others. (4) *Moral mode*. Communication classified as falling within this mode is said to contain an explicit or implicit "ought." Its broad category includes a number of specific categories, such as "should" statements, instructions, permissions, prohibitions, prodding, and good/evil statements, among others. This category system is a unique one and is included here because it has an atypical focus on the modes of expression employed by individuals in interaction situations.

Availability of measure: Roberts, William L. "Modes of Communication: A Model for Studying Teacher-Student Interaction." Doctoral dissertation, Princeton Theological Seminary, 1968.

51. Modes of Speech Continuum

A measure of communication competence, this instrument was developed for use with children ages two and one-half to four years. It is administered individually in an interview format. The interview consists of a series of preestablished probes, and the child is given two chances to respond to each probe. The probes are organized around seven functional uses of speech:

(1) contactive—initiating communication, (2) conversative—keeping interaction going, (3) descriptive, (4) directive, (5) explanatory, (6) narrative, and (7) persuasive. The child's response to each probe is judged as either appropriate or inappropriate. There are two probes for each of the seven functional areas. With minimal training, interobserver reliability in classifying responses as appropriate or inappropriate is reported to range from 0.78 to 0.81. Arguments for validity are primarily of the content and construct types. However, some information is available that suggests discriminant validity for the measure. That is, the instrument appears to assess not just language abilities or linguistic competencies but the ability of the child to meet the functional demands of the communication situation. For this reason, the instrument is suggested as a way of assessing communication competence in young children.

Availability of measure: Riccillo, Samuel C. "Children's Speech and Communicative Competence." Doctoral dissertation, University of Denver, 1974.

52. Nonverbal Measure of Children's Frustration Response

Appropriate for ages three and one-half to seven, this instrument is an indirect assessment of a child's responses to frustrating situations. The child is presented eighteen sets of pictures. Each set contains two pictures that establish a frustrating situation and three pictures that correspond to the responses most likely to be engaged in by the individual depicted in the frustrating situation. For each set, the response pictures characterize either an aggressive response, a prosocial response, or an avoidance response. There are two forms of the test, one for girls and one for boys. The child receives a score for each of the three response choices, the score indicating the total number of choices for each type of response selected. The test can be administered in approximately fifteen minutes. Internal reliabilities are moderate to high, consistently higher for boys than for girls. Validity of the measure was supported by finding correspondences between test scores and extensive observations of behavior in a nursery school setting, as well as correspondence between aggressive responses to the pictured situations and preferences for viewing aggressive television programs.

Additional information: Vondracek, F. W.; Stein, A. H.; and Friedrich, L. K. "A Nonverbal Technique for Assessing Frustration Response in Preschool Children." *Journal of Personality Assessment* (1973): 355–362.

53. Observation of Socialization Behavior

This rather complex assessment procedure uses both observation and ratings. It is applicable to children aged three to eight and assesses a range of interaction variables. It has two forms, the first appropriate for analyzing videotaped interactions and the second appropriate for analyzing live

interactions as they occur. The corpus of events to be analyzed is generated by placing children in a peer-group interaction setting involved unstructured situations. A heavy focus of the instrument is on the quantity and quality of the verbal and nonverbal communication displayed in the unstructured interaction situations. Observation and rating procedures are grouped for scoring purposes according to emotional tone, social behavior, nonverbal-behavior/physical-behavior, nonverbal-behavior/play-context, verbalization, involvement, peer interaction, group interaction, adult interaction, and inferred motivation. Many of the dimensions scaled through these procedures are drawn from other measures. Information on the adequacy of the measure is scarce.

Availability of measure: Institute for Family and Child Study, Home Management House Unit #2, Michigan State University, East Lansing, Michigan 48824.

54. Orientation Inventory

This inventory assesses types of satisfaction and rewards sought in interpersonal situations. It identifies three orientations: self-orientation, interaction orientation, and task orientation. Interaction orientation is conceptualized differently than it is in the communication discipline. Interaction orientation is conceived of in terms of an individual's concern with maintaining happy, harmonious relationships in a superficial way, often making it difficult to contribute to task accomplishment or to be of real help to others. The inventory consists of several dozen statements, with three alternatives for each statement. The three alternatives to each item correspond to the three orientations assessed by the inventory. The inventory was developed for use at college and adult levels. Test/retest reliability ranges between 0.73 and 0.76 for the three scales. Validation checks may be interpreted as demonstrating moderate levels of validity. There is some evidence that the subscales distinguish among more-successful and less-successful supervisors: more-successful supervisors score higher on task-orientation, and less-successful supervisors score higher on self-orientation. Remaining validity information demonstrates only moderate correspondence between scale scores and expert ratings and between scale scores and other personality inventories.

Availability of measure: Bass, Bernard M. "The Orientation Inventory." Palo Alto, California: Consulting Psychologists Press, 1962.

55. Pagel's Interpersonal Tactics Stories

Usable with late elementary and early junior high school males, this instrument assesses the dispositions of boys to advocate violent or nonviolent tactics as the "best" method of handling peer disputes. It consists of four stories, each describing interpersonal conflict situations involving two boys of the same

age, neither of whom has an apparent physical, emotional, or mental advantage. Each story leads to a confrontation and ends with a question concerning what the target character in the story should do next. Five alternative tactics are presented at the conclusion of each story. Four of these tactics describe nonviolent strategies for resolving the conflict. One of the alternatives describes the use of a violent tactic, such as slapping, hitting, or punching. Stories were developed at fifth-grade reading level. The stories have high content validity, since they were developed through interviews with directors of youth recreation centers, and were pretested with elementary school boys for understanding of the stories and plausibility of the tactics. Relatively little information on the adequacy of the measure is available; however, the instrument was developed in such a way as to suggest considerable potential as a measure of predisposition toward violent or nonviolent resolution of interpersonal conflict situations.

Availability of measure: Pagel, Thomas F. "Choice of Violence: A Study of Values, Television Program Preferences, Television Viewing Habits, and Selected Sociopsychological Characteristics as Related to the Selection of Violent or Nonviolent Interpersonal Tactic Alternatives." Doctoral dissertation, University of Denver, 1971.

56. Palo Alto Group Therapy Scale

This instrument is included here because it contains eighty-eight brief descriptions of behavior that may be employed by an observer or a group leader to describe the behavior of group members in simple, true/false terms. The items cover a wide range of behaviors, yet the inventory is simple enough to allow for the scoring of six to ten group members per hour. It was developed to assess the adequacy of an individual's interpersonal relationships in a group-therapy setting. It focuses on the avoidance of human contact, the amount of anxiety or discomfort exhibited, empathic ability, and willingness to accept common goals and to work cooperatively for goal fulfillment. It was developed specifically for use with group-therapy patients and was tested for adequacy on a sample of 128 hospitalized patients. It has moderate-to-strong reliability, but interobserver reliability seems to fluctuate as a function of the type of group being described. Tests of its concurrent validity demonstrate a correspondence between scale scores and group-leader rankings of patients. In addition, the items adequately discriminate between patients identified as "best" and patients identified as "poorest." It is one of the few instruments that generates normative judgments about the adequacy of an individual's interpersonal relationships in group settings, and it is included because of the potential applicability of some of the items to nontherapy settings.

Availability of measure: Finney, B. C. "A Scale to Measure Interpersonal Relationships in Group Psychotherapy." *Group Psychotherapy* (1954): 52–56.

57. Peabody Picture Vocabulary Test

The Peabody Picture Vocabulary Test was designed to measure verbal intelligence exhibited through the subject's hearing vocabulary. This test is particularly useful with nonreaders or remedial readers. The test consists of a series of pictures that are presented to the child by the examiner. The child is asked to point to the correct picture on hearing the word from the examiner. The test requires ten to fifteen minutes for each child. The total raw score is the number of correct responses. The scores may be converted into three types of derived scores: (1) an age equivalent (mental age), (2) a standard score equivalent (intelligence quotient), and (3) a percentile equivalent. Extensive standardization information, reliability information, validity results, and normative data are available in the test manual. The Peabody Picture Vocabulary Test is one of the most widely used of the vocabulary tests and is considered to be one of the most adequate. It is appropriate for use with ages three to eighteen.

Availability of measure: American Guidance Service, Publishers Building, Circle Pines, Minnesota 55014.

58. Perceived Confirmation Inventory

The Perceived Confirmation Inventory, developed by Evelyn Sieburg, is a self-report instrument consisting of six rating scales believed to reflect the extent to which an individual feels confirmed by another. The respondent rates any designated other in terms of the extent to which the other's behavior reflects an awareness of, interest in, acceptance of, respect, liking, and trust for the respondent. It was refined with samples of college students, but it is applicable to other age groups. It has high internal reliability and high content validity. Evidence is presented to support that when subjects rate different targets (other, friend, and professor) the ratings are consistent within targets and different across targets. The inventory appears to be a straightforward and adequate assessment of the extent to which an individual feels he or she has been confirmed by a designated other.

Availability of measure: Jacobs, Merelyn R. "Levels of Confirmation and Disconfirmation in Interpersonal Communication." Doctoral dissertation, University of Denver, 1973.

59. Performance Record for the Personal and Social Development Program

This general assessment procedure is included here for three reasons. (1) It may be used by teachers to categorize student behavior in the classroom. (2) It implies a strong normative judgment concerning behaviors that need improvement and behaviors to be encouraged. (3) Some of the categories of behavior, such as "social adjustment" and "sensitivity to others" suggest that the assessment procedure is focused at least partly on the communicative behavior of

students in classrooms. The instrument focuses attention on eight categories of student behavior: personal adjustment, responsibility and effort, creativity and initiative, integrity, social adjustment, sensitivity to others, group orientation, and adaptability to rules and conventions. These categories of behavior are described with examples, and, within each category, the descriptions are divided into behaviors that need improvement and behaviors to be encouraged. The instrument might more properly be regarded an observation guide. It does, however, call for the classification of behaviors within each of the eight categories and requires, further, the assignment of behaviors to either a positive or negative subcategory for each of the general categories. It is intended to be used over a period of several months to assess a child's weaknesses and strengths. Since it is an observation guide rather than a measure, usual information concerning its adequacy is scarce. However, it was developed according to critical-incidence techniques. The category system grew from an analysis of five thousand behaviors regarded as "critical incidents" in the sense that these behaviors were assumed to bear directly on the child's later personality and character development. The merits of the category system are predominantly in terms of the excessive care taken in its development rather than in standard tests of its reliability and validity subsequent to its development.

Availability of measure: Science Research Associates, 57 West Grand Avenue, Chicago, Illinois 60610.

60. Performance Style Test

This self-report instrument, consisting of fifty-five true/false items, was developed to identify an individual's characteristic performance style in interpersonal relations. The test is keyed so that each respondent may receive a score in the form of a percentile rank on each of three performance styles in interpersonal relations. The three performance styles are conceptualized as (1) the extent to which an individual dislikes and prefers to avoid interpersonal contacts in which, in his or her own eyes, he or she is called upon to act or to play a role; (2) the extent to which an individual typically is skilled in interpersonal relations, enjoys them, and knows what to do in interpersonal contexts; (3) the extent to which an individual's behavior is directed almost completely by the nature of the interpersonal situation in which the individual happens to be. The test was developed with 852 undergraduates in introductory psychology courses at the University of Connecticut. Test/retest reliabilities tend to cluster around 0.85. Scores on the three performance styles are negatively intercorrelated, and the items appear to discriminate effectively among the three performance styles, as conceptualized.

Availability of measure: Ringe, K., and Walston, K. "A Test to Measure Performance Styles in Interpersonal Relations." *Psychological Reports* (1968): 147–154.

61. Personal Orientation Inventory

The Personal Orientation Inventory is included here for two reasons: (1) Shostrum's extension of Maslow's theories of self-actualization has influenced work in the field of communication, particularly in the area of interpersonal communication. (2) Several of the subscales derived from the inventory may be useful in investigations of functional communication. In particular, the subscale "capacity for intimate contact" assesses the extent to which an individual exhibits the ability to form and sustain intimate relationships. Intended as a measure of personal maturity, with "self-actualizers" presenting the presumed highest level of personality development, the instrument in general and many of the subscales have been interpreted as having direct relevance to the investigation of, and the conceptual understanding of, effective communication. The inventory consists of 150 forced-choice items. The items are self-descriptive, and the respondent selects the one from each pair that best characterizes self. The inventory requires approximately twenty minutes to complete. Raw scores may be converted to percentiles derived from a sample of 2,607 college freshmen. Norms are available for other comparison groups, including student nurses, male supervisors, college juniors and seniors, high school students, and delinquent males. Considerable information is available on the adequacy of the measure. The assumption is that readers of this volume would not be interested in the use of the inventory to distinguish healthy personalities from unhealthy ones. If used for research purposes, the instrument has adequate validity. Considerable care has been taken in the development of the inventory, but the researcher would need to test the the reliability of the subscales before using them individually.

Availability of measure. Education and Industrial Testing Service, San Diego, California 92107.

62. Personal Report of Communication Apprehension

The Personal Report of Communication Apprehension (PRCA), a self-report measure of communication apprehension, was developed for use with college students, tenth graders, and seventh graders. The instrument consists of twenty items rated by subjects on a five-interval, agree/disagree scale. The items focus on interpersonal communication, group communication, and a few "extreme" public-speaking and small-group situations. Reliabilities are reported to be in the 0.90s for PRCA-college and in the .80's for PRCA-10th grade and PRCA-7th grade. Test/retest reliability for PRCA-college, over a ten-day period, was 0.83. Validations focused upon, and demonstrated a correspondence betweeen, PRCA scores and student self-ranking compared across members of small-discussion groups. In addition, correspondence is reported to exist between unusually high scores obtained by students and observer's evaluations of these

high-scoring students. The validation work contained in the original report of this instrument is somewhat sparse, but a reasonably high degree of content validity for the items makes this instrument worth examining.

Availability of measure: McCroskey, James C. "Measures of Communication-bound Anxiety." *Speech Monographs* (1970): 270–278.

63. Personal Report on Confidence as a Speaker

This instrument assesses emotions experienced by students speaking formally before peers. It focuses on related dimensions of fear versus confidence. The instrument itself consists of three sections: (1) two scales, one on which respondents report feelings before speaking, the second on which respondents report feelings during speaking; (2) a checklist of adjectives describing feelings before and during speaking (twenty-two items); (3) 104 descriptive statements on which respondents report degrees of fear and degrees of confidence. Following validation work on the instrument, the third section has been used most frequently and is used occasionally still. The instruments was devised by sampling college-student responses. Its internal reliability is approximately 0.87 to 0.93. External reliability figures contained in the original report of the instrument are suspect, since test/retest correlations for the 117 subjects were based on scores obtained prior to, and after, four months of speech training. In our opinion, the strongest argument for the validity of the instrument is contained in the high intercorrelation among the three sections of the instrument. Moreover, moderate correlations are reported between self-reported anxiety (scores on this instrument) and observers' ratings. In addition, moderate correlations are reported between self-reported anxiety and relevant subscales of a psychological inventory.

Availability of measure: Gilkinson, Howard. "Social Fears as Reported by Students in College Speech Classes." *Speech Monographs* (1942): 141–160.

64. Porch Index of Communicative Ability

Developed to diagnose levels of communicative ability in aphasics, the Porch Index of Communicative Ability (PICA) yields gestural, verbal, graphic, and total scores. It requires approximately one to one and a half hours to administer. The examiner rates subject responses on a relatively complex rating scale (sixteen scale intervals or scoring categories). The responses are in the same mode as the subtests (gesture, verbal, graphic) and as the input modalities (visual recognition, spoken words, reading). The ratings are transformed in percentile ranks, based upon a sample of 150 adult aphasic patients. Forty hours of study and practice in administering and scoring under someone already trained in the use of PICA is recommended. The instrument is directed toward adult aphasic patients. For

trained scorers, reliability is in the 0.90s. The validity of the tests seems to be primarily content or face validity.

Availability of measure: Consulting Psychologists Press, 577 College Avenue, Palo Alto, California 94306.

65. Purdue Basic Oral Communication Evaluation Form

This measure of general communication effectiveness requires an interview conducted for the purpose of generating subject responses that are then rated on several dimensions: (1) physical communication, (2) vocal communication, (3) verbal communication ("use of language"), (4) listening and feedback behavior, (5) adaptive behavior (monitoring), (6) general personality impressions, (7) overall score (a "gestalt" evaluation). After a completed interview, the interviewer rates the subject on each of the dimensions identified above. The instrument requires skilled or trained raters, and apparently there is no standardized interview schedule. It is designed to assess general communication effectiveness for adult subjects. The principal argument for the adequacy of the measure is represented by evidence that trained interviewers accurately discriminated between "successful" and "less-successful" supervisors in a large service industry. It is rather a global measure. The scores derived from the rating scale are not normed or standardized. However, because it assesses general communication effectiveness in a face-to-face interaction setting, it has marked advantages as a direct measure of communication effectiveness.

Additional information: Pace, R. Wayne, and Simons, Herbert W. "Preliminary Validation Report on the Purdue Basic Oral Communication Evaluation Form." *Personnel Journal* (1963): 191–193.

66. Receiver Apprehension Test

A twenty-item, self-report measure of apprehension experienced in the receiving of communication. Its focus is on receiver apprehension, primarily in interpersonal-communication situations. Developed by sampling responses of college students and then compared by factor analysis with the Personal Report of Communication Apprehension, this instrument seems to focus discriminatingly on apprehensions experienced by receivers. In this respect, the instrument is unique. Its correlation with the Personal Report of Communication Apprehension is low (0.20), thus adding to a claim for discriminant validity. The internal reliability of the instrument is reported to be 0.91. Its merit and utility derive from its unique focus on receiver apprehension.

Availability of measure: Wheeless, L. R. "An Investigation of Receiver Apprehension and Social Context Dimensions of Communication Apprehension." *Speech Teacher* (1975): 261–268.

67. Resource Process Coding System

This unique category system centers on interaction settings in which the individuals transmit informational resources to each other. Though designed for the analysis of interaction in correctional and mental-health settings, it seems to be applicable to almost any institutional setting in which information exchange occurs. It may be employed by a single observer, coding interaction as it happens. The tendency has been to modify this basic category system in terms of the demands of the institutional setting in which it is used. The basic category system differentiates, at the broadest level, between modes, information, direction, and support. Within each mode there are six resource categories: seeking, giving, depriving, accepting, ignoring, and rejecting. The category system has several meritorious features, not the least of which is the careful explication of the support mode. The category system not only focuses on the characteristics of interaction associated with information exchange and the supplementary process of supplying direction and orientation but also provides a means for analyzing the character of interpersonal support present in the interaction. The categories of seeking support, giving support, depriving support, accepting support, ignoring support, and rejecting support are a focus for the analysis of interaction, usually not present or not sufficiently explicated in other category systems.

Additional information: Longabaugh, Richard. "The Structure of Interpersonal Behavior." *Sociometry* (1966): 441–460; Longabaugh, Richard, and Eldred, Stanley H. *A Resource Process Coding Manual.* McLean Hospital, Belmont, Massachusetts, 1964.

68. Scale to Measure Affective Sensitivity

This measure of empathic ability was developed by sampling responses of undergraduate students, master's degree students, and practicing school counselors. The subject views a videotaped interaction between a client and a therapist. The subject is given a set of eighty multiple-choice items, each consisting of one accurate description and two distracting descriptions of the feelings the client is exhibiting on the videotape. The subject is asked to identify, for each multiple-choice item, the one accurate description. Test/retest reliability for two different groups over one week is reported to be 0.75; over 6 months, to be 0.58 and 0.67. Concurrent validity for the scale appears to be marginal. There is a general pattern of moderate rank-order correlation between scale scores and therapist evaluations of subjects, between scale scores and clinical supervisors' rankings of doctoral students, and between scale scores and staff ratings of counselors. However, a reasonably good argument for the validity of the scale is represented by the significant reported improvement in scale scores

over six months of an education/training program for student subjects. The predictive validity of the instrument appears to be stronger with low scale scores. The low scale scores tend to select negative distractors in the multiple-choice items, perhaps projecting feelings of rejection on the clients. The test developers hypothesize that inaccuracies may be tied to the failure to accurately perceive cues exhibited by the client. Thus, this instrument may fit, as well, under the category "nonverbal receiving ability."

Additional information: Campbell, Robert J.; Kagan, Norman; and Krathwohl, David. "Scale to Measure Affective Sensitivity." *Journal of Counseling Psychology* (1971): 407–412.

69. Self-Disclosure Questionnaire

Developed in connection with an attempt to validate Jourard's Self-Disclosure Questionnaires (sixty-item and twenty-five-item forms), this measure is an attempt to assess actual disclosure rather than self-reported disclosure. It consists of five questions directed toward five areas: interests, personality, studies, body, and money. The responses to these questions provide the base from which disclosure is inferred. Answers to the questions are rated on a three-point scale. In addition to rated levels of disclosure in responding to the questions, a word count is tabulated to indicate the total amount of disclosure. The depth of disclosure ratings correlate with the amount-of-disclosure index at 0.84. Interrater reliability for coding the answers to the five questions is reported at 0.83. The correlations between scores on this measure and scores on Jourard's self-report measures are sufficiently low to raise questions concerning the concurrent validity of either or both approaches to assessing self-disclosure. However, Jourard's measure is directed toward assessing self-reported disclosure to specific targets: mother, father, best male friend, best female friend. This measure, on the other hand, is directed toward assessing actual self-disclosure to an unidentified target (whoever is going to be reading the questionnaire responses). Under such circumstances, low to moderate correlations between the two measures might be expected.

Additional information: Pederson, D. M., and Breglio, V. J. "The Correlation of Two Self-Disclosure Inventories with Actual Self-Disclosure: A Validity Study." *Journal of Psychology* (1968): 291–298.

70. Sensitivity to Vocally Expressed Emotions (our label)

A forty-five-item tape recording composed of recorded recitations of five speakers communicating eight emotional meanings and one neutral expression. The eight emotional meanings are anger, boredom, affection, cheerfulness, impatience, joy, sadness, and satisfaction. Each emotional meaning, as well as the

neutral one, is conveyed by means of the same standard paragraph. The subjects are presented with the list of nine categories and are asked to identify which meaning is being expressed on the tape-recorded paragraph. Sensitivity to vocally expressed emotional meanings is determined by the number of correct identifications made. Test/retest reliability is reported to be 0.82.

Additional information: Davitz, J. R., and Mattis, S. "The Communication of Emotional Meaning by Metaphor." In *The Communication of Emotional Meaning*, edited by J. R. Davitz. New York: McGraw-Hill, 1964, Pp. 157–176.

71. Sentence Completion Form

Usable with both elementary and high school students, the instrument assesses the predisposition to exhibit socially approved or aggressive-disruptive behavior. It focuses on the classroom setting. It is administered in interview format for young children and in self-report format for older children. It consists of twenty incomplete sentences for which the respondent provides endings. Criteria for differentiating between socially approved behavior and aggressive-disruptive behavior grow from an analysis of the responses of two groups of children, one group that exhibited socially approved behavior and another group that exhibited aggressive-disruptive behavior. Characteristic ways in which these two groups completed the sentences serve as empirical bases for scoring the instrument. Subjects score low (socially approved) or high (aggressive-disruptive) only if their responses correspond to those characteristic of one of the two criterion groups. Responses not characteristic of the two criterion groups are given a middle-range score. The response to each incomplete sentence is scored separately, then summed to yield a total score. Interscorer reliabilities are reported to be in the 0.70s.

Availability of measure: Feldhusen, J. F.; Thurston, J. R.; and Benning, J. J. "Sentence Completion Responses and Classroom Social Behavior." *Personnel and Guidance Journal* (1966): 165–170; Soh, K. C. "Sentence Completion Form: A Validation Study." *Psychology in the Schools* (1973): 316–319.

72. Situation Exercises

This instrument consists of different sets of paragraphs that describe frustrating experiences encountered by children. Sets of paragraphs are written for both boys and girls, as well as for different ages. The test is appropriate for elementary and junior high school students. The frustrating experiences are: being accused of cheating in school, being threatened with punishment for an unavoidable mistake, receiving a social rejection, and not being allowed to make a simple decision over clothing selection. The intent of the instrument is to identify tendencies toward socially approved or aggressive/disruptive behavior.

These tendencies are tapped by confronting subjects with the brief situation descriptions and then asking subjects to write all the things that could be said or done in response to the frustrating situation. Responses are analyzed for adaptivity, abasement, dependence, and aggression. It is suggested that the instrument be administered by a trained social worker or psychologist. Scoring for the quantitative score "adaptive" apparently may be accomplished without considerable training, but training seems to be required for the qualitative scores, abasement, dependence, and aggression. The adaptive score is arrived at by comparing subject responses with those responses elicited from two criterion groups: socially approved children and aggressive-disruptive children. Inter-scorer reliability is reported to be in the 0.80s and 0.90s. This instrument and the Sentence Completion Form reviewed earlier were developed by the same team of individuals for research purposes.

Additional information: Feldhusen, J. F.; Thurston, J. R.; and Benning, J. J. "Studying Aggressive Children through Responses to Frustrating Situations." *Child Study Journal* (1970): 1–17.

73. Situation Test

The situation test involves a general assessment procedure; specific measures are derived from it. The general assessment procedure involves two alternate forms, each consisting of ten social situations presented orally, on tape, by a male voice. The taped male voice describes situations involving a female. A female voice then presents a line of dialogue to which the subjects respond outloud. The subject's responses to each of the ten social situations are recorded. The recorded responses are then analyzed in a number of ways, two of which may be of interest in terms of assessing interpersonal communication functions. The responses are analyzed for "anxiety signs," including failure to respond, stuttering, repetition of words or phrases, halting within a sentence, unfinished sentences, or mispronunciations. Anxiety signs are reflected as proportions of the number of words per response. A second measure of potential interest involves adequacy ratings. Each response is rated in terms of its adequacy in meeting the functional demands of the social situation described on the tape. The assessment procedure and related measures were tested on small samples of college students. Interobserver and inter-rater reliabilities were sufficiently high to allow the presumption that the general assessment procedures may be employed to produce measures of both anxiety and adequacy of response. The assessment procedures are somewhat cumbersome. However, the Situation Test seems well conceived, so that judgments can be made about the adequacy of communicative responses in social situations.

Additional information: Rehm, R. P., and Marston, A. R. "Reduction of Social Anxiety Through Modification of Self-Reinforcement: An Instigation Therapy Technique." *Journal of Consulting and Clinical Psychology* (1968): 565–574.

74. Situational Preference Inventory

Directed toward identifying preferred styles of social interaction, this self-report instrument is used appropriately with ages from junior high school level to adult. It consists of twenty-two sets of statements, three statements in each set, with a given statement reflecting either a cooperational, instrumental, or analytic style of interaction. Statements are ranked within each set. The cooperational and instrumental styles need no explication; however, the analytic interaction style is conceptually treated somewhat differently in this instrument than it is by communication scholars, especially those identified with the area of interpersonal communication. The analytic style as reflected in this instrument is characterized by greater sensitivity to situational and interpersonal cues than is the analytic style described in the literature associated with interpersonal communication. Test/retest reliabilities are in the 0.70s and 0.80s. This instrument seems to have been carefully developed and apparently is in wide use.

Availability of measure: Edwards, Carl L. "Interactive Styles and Social Adaptation." *Genetic Psychology Monographs* (1973): 123–174.

75. Social Accessibility

This measure of social accessibility may also be regarded as a measure of self-disclosure. It is a paper-and-pencil questionnaire consisting of fifty items. The respondent indicates whether or not he or she would answer a particular question asked by (1) a stranger that would probably never be seen again, (2) an acquaintance, (3) a best friend, or (4) no one. Each response is scored from 0 to 3, the total score indicating the extent to which an individual reports himself or herself as being accessible to others. The instrument was developed and tested on samples of eighteen-to-twenty-year-olds. One of its unique features is that it maintains moderate external reliabilities for administrations repeated over a four-year period. In its present form, the scale may not discriminate very well between high and low revealers, since many of the items are somewhat dated. Answering these items, by today's standards, seems subjectively to involve much less risk for an individual than it might have in 1958. With some revision, however, the instrument may be usable as a measure of the extent to which an individual is accessible to others or is likely to reveal self to others.

Availability of measure: Rickers-Ovslankama, M. A., and Kusmin, A. A. "Individual Differences in Social Accessibility." *Psychological Reports* (1958): 391–406.

76. Social Adjustment Behavior Rating Scale

This is a clinical diagnostic instrument developed through the sampling of responses of male psychiatric patients in thirty-eight Veterans Administration

hospitals. It is included here because it contains a thirty-three-item socialization-level subscale that assesses one's adequacy of social interaction, ranging from complete social isolation at one extreme to maximum breadth and depth of mature social interaction at the other extreme. The initial item pool consisted of four hundred behavior statements that consequently have been refined, through extensive analysis, to a twenty-nine-item work-level scale and a thirty-three-item socialization-level scale. Subject behaviors are rated by professional psychiatric clinic personnel. There is extensive information on the reliability and validity of the scale in terms of its clinical use. However, it is included here because the socialization-level subscale was constructed according to Thurstone scaling procedures. Consequently, the socialization-level subscale makes available a set of behavior statements ranging across a continuum from one extreme to the other, reflecting approximately equal intervals between scale steps. It may be worth examining for its potential as a measure, at the interval level, of the adequacy of social interaction.

Additional information: Aumack, L. "A Social Adjustment Behavior Rating Scale." *Journal of Clinical Psychology* (1962): 436–441.

77. Social Insight Test

This instrument is included because the concepts "communication competence" and "functional communication" are very closely associated with the appropriateness of an individual's responses in a particular social situation. The Social Insight Test is directed toward assessing the appropriateness of interpersonal responses. Part I requires the respondent to select the most-appropriate or most-logical response, and part II requires the respondent to choose the response yielding the most satisfaction and least embarrassment to the other individual. Each item consists of a description of an interpersonal situation and four alternative response choices. The total test consists of twenty-five items. The respondent's score is based upon the number of correct responses identified. The correct response is one that exhibits the respondent's ability to identify the most-probable reason for the behavior of an individual described in the item or one that exhibits the respondent's ability to identify the most-likely consequences of a particular behavior. The response alternatives for each item are weighted empirically according to the two criteria identified above. The inventory requires approximately thirty minutes to administer. The internal reliabilities of the test are marginal. Adequacy may be argued primarily from the point of view of concurrent and construct validity. At present, it seems adequate for use in research but insufficiently validated for individual or diagnostic purposes. It is most appropriate for use with adults.

Availability of measure: Consulting Psychologists Press, 577 College Avenue, Palo Alto, California 94306.

78. Southwestern Cooperative Educational Laboratory Interaction Observation Schedule

This category system is applicable to classroom communication and may be employed by an observer coding communication as it occurs. It is used to classify verbal and nonverbal communication between students and teachers. It is directed toward classifying events and processes of an affective nature and encompasses concern for identifying teacher behaviors likely to promote tension and those likely to reduce tension. There are two major categories, one for classifying student behaviors and the other for classifying teacher behaviors. The essential nature of the category system may be understood by examining the categories of teacher behavior. Categories of teacher behavior are blocked according to whether the behavior is likely to promote or to reduce tension. There are ten categories of tension-reducing teacher behaviors, such as praising students, asking or allowing students to help each other, using encouraging remarks, using or promising rewards, apologizing, and allowing pupils to speak without permission. There are eight categories of tension-promoting teacher behaviors, including such things as warning students, frowning or glaring, punishing, calling on a student who has not volunteered, using sarcasm, criticizing or correcting students, and ignoring or interrupting students. Organization of the category system, differentiating student and teacher behaviors in terms of their affective qualities, makes this category system potentially useful in continuity analyses. That is, the category system lends itself to a description of the types of student behaviors most likely to follow particular kinds of teacher behavior, and vice versa.

Additional information: Bemis, Katherine A., and Liberty, Paul G. "Southwestern Cooperative Educational Laboratory Interaction Observation Schedule (SCIOS): A System for Analyzing Teacher-Pupil Interaction in the Affective Domain." Southwestern Cooperative Educational Laboratory, Inc., Albuquerque, New Mexico, 1970.

79. Speech Anxiety Inventory

This self-report instrument assesses speech anxiety conceptualized in two ways: (1) anxiety experienced during a particular speech (state) and (2) individual but generalized predisposition to experience anxiety in speaking situations (trait). The items were drawn from an earlier anxiety measure (Personal Report on Confidence as a Speaker) and were revised to reflect the distinction between state and trait anxiety. The inventory consists of fifty-six items, half directed toward trait anxiety and half directed toward state anxiety. All items are scaled across four intervals. All items are focused on the public-speaking situation. Normalized scores and percentile ranks for 249 undergraduates in fundamental

speech courses at Florida State University are available from the author. Reliability information is available primarily on speech-A trait. Repeated administration to 95 undergraduates over three consecutive months produced external reliability coefficients ranging from 0.73 to 0.84. Internal reliability estimates range from the 0.70s to the 0.90s. Responses on the trait scale across four occasions (two speaking, two nonspeaking) produce moderate-to-strong intercorrelations. Since trait anxiety is conceptualized as generalized predisposition to experience anxiety in speaking situations, these intercorrelations may suggest a weakness in the discriminant validity of the measure. If the measure assesses trait anxiety, intercorrelations between speaking and nonspeaking situations should be much lower than those reported. However, additional validation information suggests strong evidence of discriminant validity. Student scores on speech-A trait increased in experimental conditions wherein subjects were required to engage in speaking but did not increase in experimental conditions not involving speaking. Consequently, there is reason to believe that this instrument assesses a form of trait anxiety directed toward generalized speaking situations and that this instrument may be more-specifically focused on speaking situations than are other measures of trait anxiety represented in the more-general psychological literature. A great deal more information is available on the validity of this instrument than is reported here. It appears to be one of the more-carefully constructed and more-carefully tested instruments for assessing speech anxiety.

Additional information: Lamb, Douglas H. "Speech Anxiety: Towards A Theoretical Conceptualization and Preliminary Scale Development." *Speech Monographs* (1972): 62–67.

80. STEP Listening Test

One of the tests in the Sequential Tests of Educational Progress series, the STEP Listening Test is clearly one of the better-designed and better-normed tests of basic listening skills. There are four levels of STEP listening: level one, appropriate for college freshman and sophomores; level two, appropriate for grades ten, eleven, and twelve; level three, appropriate for grades seven, eight, and nine; level four, appropriate for grades four, five, and six. Each of the levels has two alternative forms of the listening test. The test assesses three basic dimensions of listening skill: (1) plain-sense comprehension, (2) interpretation, (3) evaluation and application. The test itself consists of a series of passages read aloud by the examiner to the respondents. These passages consist of directions and simple exposition, narration (both simple and figurative), argument and persuasion, and aesthetic material (both poetry and prose). Respondents are provided with answer sheets in multiple-choice format. Raw scores are transformed to percentile bands.

Availability of measure: Cooperative Test Division, Educational Testing Service, Princeton, New Jersey 08540.

81. System for the Analysis of Classroom Communication

One of the organizations responsible for a good share of the work done in analyzing and systematizing assessment procedures used in educational settings is the Center for the Study of Evaluation at the University of California at Los Angeles. This category system was developed by the staff of that organization. It is applied to the analysis of classroom communication. It may be employed by a single observer, coding communication as it occurs. It may be used for research purposes, as a supplement to standard educational evaluation procedures, or in training settings. It has three broad dimensions: (1) teacher behavior, subdivided into five categories; (2) pupil behavior, subdivided into five categories; (3) behavior involving both teacher and pupil, subdivided into two categories. In each general dimension, the specific categories are further differentiated. The degree of differentiation varies from category to category. A teacher's behavior is classified in terms of positive affect, negative affect, statements, questions, and control of behavior (or classroom management). Each of these categories is differentiated further. Pupil behavior is classified as pupil responses; pupil initiative; practice skills to develop rapid, automatic response; positive affect, and negative affect. The first three categories are differentiated further. Behavior involving both teacher and pupil is classified in terms of silence or noise, or procedural interchange. Each of these categories is differentiated further.

Additional information: Jones, Margaret E. "Reliability of Coding of the System for the Analysis of Classroom Communication (SACC)." Center for the Study of Evaluation, University of California at Los Angeles, 1969.

82. Teacher-Child Dyadic Interaction

This category system is appropriate for research purposes. It focuses upon classroom communication. It may be used by one observer classifying communication as it occurs. This category system is included here because a substantial block of its categories is directed toward identifying teachers' feedback reactions. The categories are divided broadly into general class activities and reading and recitation times. Within general class activities, there are categories to identify response opportunities (types of teacher behavior that provide opportunities for students to respond), level of question (four types of teacher-initiated questions), child's answer (four basic ways in which the student might respond to the teacher-initiated questions) and teacher's feedback reaction. This last broad category, in the section of the category system dealing with general class activity, contains twelve categories

describing the feedback a teacher provides the student. The twelve categories are praise, affirmation of correct responses, no feedback reaction (that is, no response or a response that does not communicate information about the correctness or incorrectness of the child's answer), negation of incorrect answers, criticism, process feedback, gives answer, asks other, calls out (this is when unsolicited responses from other students provide the correct answer), repeats question, rephrase or clue, and new question. The focus on teacher feedback responses is a major concern of this category system. The category system, in general, includes not only this concern but also categories directed toward cognitive behaviors, classroom procedure or routine, and the analysis of teacher and student communicative behavior occurring while students are taking turns reading or reciting.

Availability of measure: Brophy, Jere E., and Good, Thomas L. *Teacher-Child Dyadic Interaction: A Manual for Coding Classroom Behavior*. Austin: The Research and Development Center for Teacher Education, University of Texas, 1969.

83. Test of Listening Accuracy in Children

This instrument assesses listening ability in children ages five through nine. It can be administered as a group test, requiring approximately forty-five minutes, with a rest after every tenth item. The test consists of eight-six items. It may also be administered individually. In both cases, the child sees three pictures and hears three words. One of the words is correct, the other is incorrect, though phonologically similar. The child's score is the total number of items correctly identified. The original observation base for the instrument consisted of 1,857 children randomly selected from one geographic area. The principal argument for the adequacy of the measure is an item analysis. One hundred thirty-two items were included in the original item pool, subsequently reduced to eighty-six through item analysis.

Availability of measure: Communication Research Associates, Inc., Box 11012, Salt Lake City, Utah 84111.

84. Tests for Auditory Comprehension of Language

This measure of listening comprehension is included here because it is directed toward the assessment of listening skills in children between the ages of two years, ten months, and seven years, nine months. It was developed with small samples of children divided into nine age groups, each representing a six-month age span. It consists of 123 items, each assigned one point for correct response. It is administered by an examiner who presents stimulus items orally. The respondent is asked to point to a picture that represents what the examiner has

requested. Each of the stimulus items assesses the child's ability to comprehend words, morphology, grammar, and syntax. Information on the adequacy of the test is sparse; however, it is our understanding that such information, as well as norms, was being accumulated at the time this volume was being prepared.

Availability of measure: Learning Concepts, 2501 North Lamar, Austin, Texas 78705.

85. Torrance Tests of Creative Thinking (Verbal Scores)

This general assessment procedure is perhaps the best-known and most widely used measure of creative thinking. Of particular interest to readers of this volume are the seven verbal tests: (1) A respondent is shown a picture and is told to ask as many questions as he or she can about what's happening. (2) For the same picture, the respondent is asked to guess possible causes of the action in the picture. (3) For the same picture, the respondent is asked to guess the consequences of the action. (4) The respondent is shown a picture of a toy and is asked to suggest ways of improving it. (5) The respondent is shown a picture of a container and is asked to suggest unusual uses for it. (6) The respondent is told to ask as many questions as he or she can about the object in item 5. (7) An improbable situation is described and the respondent is asked to suggest its consequences. Responses can be scored for fluency (the number of relevant responses), flexibility (the number of spontaneous shifts from one category of meaning to another), originality (the relative infrequency of the responses given), and elaboration (the detail and specificity of the responses). The verbal tasks require about forty-five minutes of testing time. The test must be scored by hand. The guides for scoring are quite clear, and the manual discusses scoring errors to be avoided. The Torrance Tests of Creative Thinking have many validation studies associated with them (fifty are reported in the manual). The strengths appear primarily to be reliability and construct validity. Test/retest reliabilities are strong for short intervals up to three years. Construct validity consistently demonstrates that the test measures behaviors consistent with the literature of creativity. It can be administered to individuals from kindergarten age through adult.

Availability of measure: Personal Press, 191 Spring Street, Lexington, Massachusetts 02173.

86. Unwillingness to Communicate Scale

The Unwillingness to Communicate Scale is a self-report, Likert/type attitude questionnaire that assesses the tendency to avoid or devalue oral communication. It probes attitudes about communication and perceptions of actual communication experiences. The items represent five dimensions:

anomia (failure to adopt or internalize societal norms and values of communication), alienation, introversion, self-esteem, and communication-apprehension/reticence. However, analysis of the instrument's construct validity produced two main factors: approach-avoidance and reward. The presence of concurrent validity is supported by virtue of correlations with like measures. Discriminant validity for the two factors considered separately is supported by demonstrated differences in the correlations of the two factors with like measures. The instrument was developed and refined by sampling college-student responses.

Additional information: Burgoon, Judee K. "The Unwillingness to Communicate Scale: Development and Validation." *Communication Monographs* (1976): 60–69.

87. Utah Test of Language Development, revised edition

The test assesses expressive and receptive language skills. It requires approximately thirty to forty-five minutes to administer. The examiner induces responses of considerable variety, including responses to sequencing tasks (repeating digits, sentences), pointing to objects, naming objects, and so on. As is usually the case, and especially with this test, the examiner must follow carefully the instructions given in the manual. Correct and incorrect responses are recorded. The test yields a raw score that is converted to the child's "language age." The test covers ages one and one-half to fourteen and one-half. It was normed on the basis of 273 "normal, bright children" in Utah. The sample apparently crossed age groups, so norms are based on small samples within age groupings. The internal consistency of the measure is high (0.94). Content validity of the test seems reasonably good, especially at the lower age levels.

Availability of measure: Communication Research Associates, Inc., Box 10012, Salt Lake City, Utah 84111.

88. Vance Language Skills Test

Developed for use with preschool children, this instrument assesses language comprehension and production. It contains eight subtests: (1) labeling of objects, (2) spatial relations, (3) environmental sound reproduction, (4) environmental sound labeling, (5) a second spatial relation subtest, (6) speech-sound discrimination, (7) precepts and concepts, (8) language structure and content. The test consists of a variety of materials, including pictures, score sheet for tasks, and instructions for scoring a structured interview. Assessment procedures require approximately one hour. It is important that the examiner be familiar with all aspects of the test and that time be devoted to developing rapport with the child. Scores are obtained on each subtest, with some normative data for comparisons. The test was designed for use in a specific research project. Relatively little information is available on the adequacy of the measure,

although internal consistency estimates of reliability for the subtests range from 0.25 to 0.94, with a mean of 0.72.

Additional information: Vance, Barbara J. "The Effects of Pre-School Group Experience on Various Language and Social Skills in Disadvantaged Children." Project #7-8070, Stanford University, Palo Alto, California.

89. Verbal Interaction Category System

An extension of the Flanders system, this category system may be used by a single observer coding classroom communication as it occurs. It provides a specific focus on teacher behavior that accepts or reject ideas and feelings expressed by the student, whether that rejection is expressed verbally or nonverbally. The system contains twelve basic categories, some of which are further subdivided. These categories are organized around five dimensions: (1) *Teacher-initiated talk*. This dimension has four categories: gives information or opinion, gives direction, asks narrow question, asks broad question. (2) *Teacher's response*. This is the central dimension, which identifies accepting and rejecting responses. There are two categories: accepts and rejects. Each of these categories is subdivided to identify responses to student ideas, behaviors, and feelings. (3) *Pupil response*. This dimension contains two categories, differentially identifying the student's response to the teacher and the student's responses to other students. (4) *Pupil-initiated talk*. This dimension consists of two categories that identify communicative behavior initiated by a student and directed either toward other students or toward the teacher. (5) *Other*. This dimension consists of two categories, one of which identifies silence; the other, confusion.

Availability of measure: Amidon, Edmund, and Flanders, Ned A. *The Role of the Teacher in the Classroom*. Minneapolis Association for Productive Teaching, 1967; Simon, Anita, and Boyer, E. G., editors. *Mirrors for Behavior III*. Communication Materials Center, Rices Mill Road, Wyncote, Pennsylvania 19095.

90. Verbal Language Development Scale

The Verbal Language Development Scale yields a gross measure of a child's "language age." It covers ages from birth to fifteen years. The measure employs an informant-interview format; that is, the examiner interviews an "informant"—a parent, teacher, or other adult who has observed the child—about the child's exhibited behavior on verbal tasks. The instrument consists of fifty items. It requires about thirty minutes to complete. Most of the items are directed toward preschool years. Each item is rated across three scale intervals by the adult informant. Behavior of the child is rated as roughly present, emergent, or absent. Scores derived from these ratings are converted by comparing the scores with those obtained by 120 normal-speaking white children from Central Utah. This original comparison group was subsequently enlarged, but the norms did not

change substantially. Both internal and external reliabilities for the instrument are adequate. The strongest arguments for the adequacy of the measure are associated with its concurrent validity. There is demonstrated correspondence between scale scores and IQ scores and between scale scores and judges' ratings of language development. A "direct-test" version of this instrument, not requiring the informant interviews, is also available (see the Utah Test of Language, Revised Edition).

Availability of measure: American Guidance Service, Inc., Publishers Building, Circle Pines, Minnesota 55014.